3.3 WILDERNESS, RECOMMENDED WILDERNESS, WILDERNESS STUDY AREAS, AND INVENTORIED ROADLESS AREAS

3.3.1 SCOPE OF ANALYSIS AND ANALYSIS METHODS

The scope of this analysis is for year round or seasonal motorized and mechanical transport use designation on system roads, trails, and areas within the Bitterroot National Forest, not including Designated Wilderness. This analysis looks at the effects of those designations on Wilderness, recommended wilderness (RWAs) (as described by the 1987 Bitterroot National Forest Plan), wilderness study areas (WSAs), and inventoried roadless areas (IRAs), which are collectively referred to as Special Designated Areas (Table 3.3-1, below). Geographic Information System (GIS) spatial data was used to determine the location of IRAs, WSAs, RWAs, and Designated Wilderness relative to the proposed alternatives.

The alternatives were evaluated using GIS technology to determine mileage and acreage differences of travel management options for routes within these areas. Effects for each IRA, WSA, RWAs, and Designated Wilderness are described for those discrete areas. Travel management decisions do not alter WSAs, RWAs, or IRAs boundaries, nor the spatial extent of these areas. Therefore, no alternative will affect the boundaries and boundary management relationship to future designation as Wilderness.

Please refer to the maps of the alternatives for the locations of the Special Designated Areas. These are on the compact disk (CD) that is attached to the cover of this document. They can also be viewed on the Bitterroot National Forest's web site: http://www.fs.usda.gov/bitterroot.

3.3.2 REGULATORY FRAMEWORK

Applicable laws, regulations, and policy that govern the management of Designated Wilderness, Recommended Wilderness, Inventoried Roadless Areas, and Wilderness Study Areas are as follows:

- The Wilderness Act of 1964 (PL 88-577)
- The Montana Wilderness Study Act (PL 95-150) S393
- Report and Draft Environmental Impact Statement – Blue Joint and Sapphire Montana Wilderness Study Act Areas, March 1985
- Forest Service Handbook id_1909.12-2005-8
- Forest Service Manual 2320, Forest Service Handbook 1909.17
- Bitterroot National Forest Plan – Wilderness, WSA, goals, objectives and standards. Management Areas 5, 6, 7a, 7b, 7c, 9, 11b and 11c
- Forest Service Manual Supplement id_2300-2005-1
- Selway-Bitterroot Wilderness General Management Direction
- Forest Plan Direction for the Anaconda-Pintler Wilderness, Beaverhead-Deerlodge, and Bitterroot National Forests, May, 1999
- Frank Church River of No Return Revised Wilderness Management Plan and Amendments for Land and Resource Management Plans, December, 2003
- Central Idaho Wilderness Act of 1980 (PL 96-312)
- The Wild and Scenic Rivers Act (PL 90-542 as amended 16 U.S.C. 1271-1287)
- 36 CFR Part 294 Special Areas, Roadless Area Conservation; Final Rule
- RARE II, 1979. (CFR 292 subpart B, §294.11)

The Wilderness Act of 1964, use of Wilderness Areas Section 4(b), describes the primary direction for wilderness stewardship as "each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area" (United States Congress 1983; Rohlf and Honnold 1988). Regarding the Forest Service's wilderness policy, Forest Service Manual 2320.2 (4) directs the agency to "protect and perpetuate wilderness character" from the time of wilderness designation.

The central importance of preserving wilderness character is underscored by several recent District and Appeals court cases showing that they are increasingly holding the agency accountable for fulfilling this legal and policy mandate to preserve wilderness character. The Bitterroot National Forest Plan provides the foundation for the current travel management plan. Forest-wide Management Goals contained in the Plan included direction to "Provide a broad spectrum of recreational opportunities" and to "Complete the Forest wilderness system." A Forest-wide Management Objective states "Recommend areas with high wilderness attributes and longstanding support for wilderness additions to the National Wilderness Preservation System." A Forest-wide Management Standard states "Subject to existing private rights and pending final action by Congress, wilderness recommendations and Montana Wilderness Study Act areas shall be managed to maintain their existing wilderness character" (USDA Forest Service 1987a, II-2, II-5, II-18, and III-41-44).

3.3.3 AFFECTED ENVIRONMENT

The Bitterroot National Forest contains three areas managed for their "wilderness character:" Designated Wilderness, RWAs (as described by the 1987 Bitterroot National Forest Plan), and WSAs. Inventoried Roadless Areas may or may not be managed for their wilderness character depending on the management area allocation in the Bitterroot Forest Plan.

These special designated areas are shown in Table 3.3-1. Some areas are "nested" or overlap, such as the Blue Joint IRA, which also has a portion of it as recommended for wilderness under the Forest Plan, as well as a portion of it as the Blue Joint WSA.

Table 3.3- 1: Special Designated Areas within the Bitterroot National Forest

Special Designated Area Name	Designated Wilderness Acres[1]	Wilderness Study Areas Acres[1]	Recommended Wilderness Acres[1]	Inventoried Roadless Areas Acres[1]
Selway-Bitterroot	508,000			
Frank Church-River of No Return	194,000			
Anaconda-Pintler	41,000			
North Big Hole				3,679
Swift Creek				614
Needle Creek				1,110
Selway-Bitterroot			48,864	115,573
Sapphire		37,806		43,514
Lolo Creek				577
Stony Mountain				44,082
Blue Joint		64,168	27,501	64,839
Allan Mountain				104,025
Tolan Creek				7,222
Sleeping Child				22,247
TOTALS	**743,000**	**101,974**	**76,365**	**407,482**

[1] Acreages in this table were generated by and used for GIS analyses. They will differ slightly from the acres shown in the 1987 Forest Plan.

While the Wilderness Act of 1964 does not specifically define "wilderness character," the framers of the Act appear to have incorporated three mutually reinforcing societal ideals that are integral to the historical purpose of wilderness and to an understanding of wilderness character (Kaye 2000, 2002) and Scott (2002):

- Natural environments relatively free from modern human manipulation and impacts
- Personal experiences in natural environments that are relatively free from the encumbrances and signs of modern society
- Symbolic meanings of humility, restraint, and interdependence in how individuals and society view their relationship to nature.

Wilderness character may be described as the combination of biophysical, experiential, and symbolic ideals that distinguishes wilderness from other lands. These ideals combine to form a complex and sometimes subtle set of relationships among the land, its management, and the meanings people associate with wilderness. Wilderness characteristics are taken from phrases in the Wilderness Act of 1964 and the Wilderness Attribute Rating System (WARS), a system that was designed to assess the capability of roadless areas for wilderness recommendation (USDA Forest Service 1977). This was the system used to rate the Montana Wilderness Study Areas in the study mandated by the WSA Act of 1977. (These definitions may differ from those within the National Wilderness Preservation System.)

Forest Service Handbook (FSH-1909.12, 72.1) discusses the attributes of wilderness, and also discusses additional attributes to be considered in evaluating potential wilderness areas. With this analysis, proposed changes within IRAs, as well as WSAs, are being considered. A cross walk between Wilderness attributes and roadless characteristics is presented in Table 3.3-2. These attributes are used to evaluate existing conditions and to compare the effects on Wilderness quality in the roadless expanse. Many of these characteristics are specific to resource issues that are elsewhere in the document, and will not be reiterated in this section.

The attributes are **natural integrity**, **apparent naturalness**, **solitude and primitive recreation,** and **solitude**, and are defined below.

Table 3.3- 2: Wilderness Attributes and Roadless Characteristics

Wilderness Attributes	Roadless Characteristics
Natural integrity. The extent to which long-term ecological processes are intact and operating.	High quality or undisturbed soil, water, and air. Source of public drinking water. Diversity of plant and animal communities. Habitat for threatened, endangered, candidate, proposed, and sensitive species dependent on large areas.
Apparent naturalness. Environment looks natural to most people.	Natural appearing landscapes with high scenic quality.
Solitude and primitive recreation. Personal subjective value defined as the isolation from the sights, sounds, and presence of others and the developments of man.	Primitive, semi-primitive nonmotorized, semi-primitive motorized ROS classes of dispersed recreation.
Remoteness. Perceived condition of being secluded, inaccessible, and out of the way.	
Unique features. Unique and/or special geological, biological, ecological, cultural, or scenic features.	Other locally identified unique characteristics. Traditional cultural properties and sacred sites.
Manageability/boundaries. Ability to manage a roadless area to meet the minimum size criteria (5,000 acres) for wilderness.	No criteria.

3.3.4 ENVIRONMENTAL CONSEQUENCES

The following analysis will compare the effects of the proposed alternatives on the wilderness attributes/roadless characteristics within Designated Wilderness, these areas recommended for wilderness under the Forest Plan, IRAs, and WSAs.

Gauging effects to **natural integrity and apparent naturalness** are relatively straightforward. It is accomplished by measuring the presence and magnitude of human-induced change to an area (physical impacts like roads and fences). **Apparent naturalness** is tracked by how the landscape appears to people, even though there may have been some minor human modifications. Travel management planning decisions that may affect these attributes are largely confined to trail disturbances (either through reconstruction or change in use type), and accompanying weed infestations, visual impact from trails, and displacement of or effects to wildlife. Altering the physical engineering of trails (that is converting single-track to double track) would also affect water movement, soil displacement and vegetation.

Opportunities for **solitude** were gauged during the Roadless Area Review and Evaluations (RARE I and II) process using the Wilderness Attribute Rating System, based primarily on physical features of the area: size, presence of vegetative or topographic screening, distance from civilization and so forth. The RARE process evaluated the potential for roadless areas to be included in the National Wilderness Preservation System {Project File folder 'material_referenced,' Project File document REFERENCE-001.pdf}. Travel management decisions would not change these parameters relating to solitude in the WSAs in any alternative. However, travel decisions do have the potential to affect peoples' perception of solitude at the time and place they are experiencing them. The presence, volume, and type of other users and the sounds and smell have all been identified as affecting the personal subjective sense of solitude. All of these effects are temporary in nature, and do not affect the attributes of an area that create a sense of solitude.

Evaluating effects to **remoteness** (opportunity for primitive recreation), are typically tracked for two parameters: physical and social. The physical parameters of an area that foster a sense of remoteness, including an area's size, distance from roads, visibility of lights, and sounds associated with civilization, would not change with travel management decisions about appropriate uses of trails in any alternative. When evaluating effects to remoteness, the social aspect of how people travel within an area is an effect often discussed. When areas have historically only been accessed by nonmotorized means, and then decisions are made to allow motorized access, more terrain is readily available to a new user group, which may compromise traditional users' sense of solitude, remoteness, challenge, and risk. At the same time areas that have historically had motorized use and then decisions are made to no longer allow this type of use can limit the challenge, risk and desired experience from an entirely different user group.

The purpose of the analysis on the roadless resource is to disclose the potential effects of motorized recreation on roadless characteristics and wilderness attributes, and to determine if, or to what extent, it might affect future designation as Wilderness under the Wilderness Act of 1964.

Each of these areas, Designated Wilderness, these areas recommended for wilderness under the Forest Plan, inventoried roadless areas, and wilderness study areas following will discuss the affected environment for these area and the environmental consequences sections will address both motorized and nonmotorized summer and over-snow vehicle use.

The effects analysis is both quantitative and qualitative. That is, the reduction or increase in road and trail miles by alternative provides a quantitative look at project effects. The extent of effects on travel routes and other recreation opportunities is necessarily a qualitative assessment based on past forest visitor patterns, historical trends, and professional judgment based on experience of the recreation specialists completing this analysis.

A. Wilderness

Affected Environment

The Bitterroot National Forest manages portions of three Designated Wilderness areas; the acres on the Forest total approximately 743,000. They are the Anaconda-Pintler Wilderness (41,000 acres), the Frank Church-River of No Return Wilderness (FC-RNR) (194,000 acres), and the Selway-Bitterroot Wilderness (508,000 acres). These areas are administered jointly with the Beaverhead-Deerlodge National Forest (Anaconda-Pintler), Nez Perce-Clearwater, Salmon-Challis, Boise, and Payette National Forests (FC-RNR), and the Lolo and Nez Perce-Clearwater National Forests (Selway-Bitterroot), respectively. The goal for these areas, in accordance with the Wilderness Act of 1964, is to ensure an enduring system of high quality wilderness.

The use of motorized equipment or mechanical transport is prohibited. There are no proposed activities within this analysis that will take place within Designated Wilderness.

Environmental Consequences

Effects Common to All Alternatives for Summer and Over-Snow Vehicle Use
There are no changes to motorized or mechanical transport access management proposed for the trails within the Selway-Bitterroot, Anaconda-Pintler, or Frank Church-River of No Return Wilderness areas in any of the alternatives.

Due to increased populations coming into the Bitterroot National Forest and the Bitterroot Valley to ride, and by reducing motorized routes, the potential for motorized intrusions into Designated Wilderness could increase throughout the nonmotorized over-snow areas. This could increase the need for additional law enforcement patrols in these areas.

Summer
Currently, levels of motorized/mechanical transport incursions in the Designated Wilderness areas are very low-to-nonexistent. Occasional motorcycle or bicycle incursions have occurred on trails such as Tin Cup #96 and Big Creek Trail #11, and may increase as some popular trails leading to Designated Wilderness are closed.

Indirect effects may include sights and sounds of motorized/mechanical transport use in areas adjacent or leading to Designated Wilderness. This may affect one's feeling of solitude and remoteness, and their opportunity for primitive recreation in some parts of the wilderness.

Over-Snow
Low levels of over-snow vehicle incursions occur randomly throughout the over-snow season, depending on snow conditions. These have occurred by Nez Perce Pass and in the Lost Horse drainage. These could increase as areas elsewhere that were popular play areas are no longer available to over snow use.

Indirect effects may include sights, sounds, and the smell of over-snow use in areas adjacent or leading to Designated Wilderness. This may affect one's feeling of solitude and remoteness, and their opportunity for primitive recreation in some parts of the wilderness.

B. Recommended Wilderness

Affected Environment

Additions to the Selway-Bitterroot Wilderness and Blue Joint Creek (also a portion of the Blue Joint Wilderness Study Area), totaling 76,365 acres, are recommended for Wilderness Designation in the Forest Plan (USDA Forest Service 1987a, III-41). Both of these areas could be added to the adjoining wilderness area or stand by themselves as a separate wilderness area.

The Selway-Bitterroot RWA is adjacent to the Selway-Bitterroot Wilderness and the Frank Church-River of No Return Wilderness areas. It provides a variety of opportunities for recreation, including hiking, backpacking, horseback riding, fishing, hunting, creek kayaking, backcountry skiing, camping, rock climbing, and enjoying nature.

The RWAs predominately host a single track trail system (12-24 inch trail width) which evolved primarily from the 1900s to about 1940. This system, for the most part, was built to provide access for fire detection and control, mining claims, privately owned dams for irrigation, and Forest Service administrative uses. Trails were constructed to accommodate pack and saddle stock and were the primary access routes in the Forest. In places, especially along high ridge routes, trails were not carefully planned but rather followed old routes used by Native Americans, miners or settlers. Few of the early trails were developed specifically for recreational opportunities or scenic purposes. Trail # 4 Bass Creek and #96 Tin Cup are notable exceptions where dozer lines were constructed along portions of the trails to access the dams at Tin Cup and Bass Lakes.

Currently, in the RWAs areas there are 67.8 miles of trail, 39.7 miles of motorized trails, 67.8 miles of trails open to mechanical transport (bicycles), and 73,809 acres open over-snow vehicle use.

Opportunities for solitude are limited on moderately-to-heavily used trails including Bass Creek, Kootenai Creek, Bear, Mill, Blodgett, Chaffin, Baker Lake, and Tin Cup. On the more heavily-used trails, users often encounter one another in a setting that otherwise seems remote due to vegetation and topographic screening. Moderately used trails, including Bear Overlook, Sawtooth, Trapper Creek, Nelson Lake, Watchtower, and Sheephead offer better opportunities for solitude. Trails open to motorcycles area are generally short, as they are closed at the Designated Wilderness boundary. There are no trails, including loops, for ATVs.

When the Bitterroot National Forest Plan was developed, over-snow vehicle cross country travel was not assessed, probably due to winter recreational motorized use being either non-existent or negligible in the 1980s. Snowmobile technology in 1987 may not have been capable of providing this opportunity in the steep, rugged terrain of the RWAs due to the power necessary to climb the slopes and also due to the limited fuel capacity the machines had. Snowmobile technology has changed rapidly in recent years, making larger, more powerful, and quieter machines available. These new machines let people access previously inaccessible backcountry.

Over-snow vehicle use has been noted in the Selway-Bitterroot additions up Lost Horse, in Blue Joint Creek, and along the western edge of the Bitterroot Valley. Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with “modern” civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude.

Currently, over-snow vehicle use is not prohibited in RWAs unless closed by special order.

Areas recommended for wilderness in the Bitterroot Forest Plan (1987) are defined in the Plan as Management Area (MA) 6.

Lands allocated to MA 6 meet the criteria for being recommended to Congress for wilderness designation in the future. In the Forest Plan, one of the goals for Management Area 6 states *“Pending action by Congress, manage to maintain the presently existing wilderness characteristic and potential for inclusion in the wilderness system.”* Recreation standard (3) states *“Continue current uses which do not detract from wilderness values. Transitory uses such as chainsaws, trail bikes and snowmobiles are appropriate if permitted by the Forest’s Travel Plan”* (USDA Forest Service 1987a, III-41).

When these areas on the Bitterroot National Forest were originally determined to be capable and available for wilderness recommendation, there were very little or no non-conforming uses. The determinations were

based on what was physically there or occurring but not necessarily the level of use. However, in the Selway-Bitterroot and Blue Joint RWAs, uses have changed or certain types of use have increased sharply, possibly affecting their wilderness attributes. As indicated in many comments received on the DEIS, mountain biking has become more popular within the RWAs on the Forest. Additionally, comments received from motorcyclists asked to be allowed to continue riding the trails in RWAs that lead to Designated Wilderness boundaries.

Sometimes standards and guidelines in Forest Plans that guide management of recommended wilderness differ, resulting in inconsistencies in management of RWAs across National Forest boundaries, causing confusion for the public, and can result in encroachment onto the adjacent National Forest.

Because these areas are recommended for designation as wilderness, management actions and decisions must be made in a consistent manner providing for protection and preservation of those attributes; it makes sense to manage them consistent with that designation. If Congress decides to drop them from further consideration, that management would be reconsidered. These considerations need to address physical, social values, (loss of solitude in the area, noise, isolation from others, fumes), and impacts to ecosystem health. While it is recognized that some types of motorized and mechanical transport use do not appear to have lasting effects on the landscape, there may be impacts on the social and biotic environment that do not show as physical "scars" on the land.

Environmental Consequences

The analysis is based on issues identified for areas recommended for wilderness designation, and the units of measure assist with predicting and characterizing consequences.

The first issue is that motorized/mechanical transport use on roads and trails in areas recommended for wilderness designation impacts their wilderness attributes. Measurement indicators are the miles of motorized routes, and how they affect wilderness attributes.

Table 3.3-3 shows the miles of motorized routes in the RWAs:

Table 3.3- 3: Miles of Motorized Routes by Alternative in Recommended Wilderness (Includes Blue Joint Creek)

	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Miles of Open Roads in Recommended additions to the Selway-Bitterroot Wilderness	0	0	0	0
Miles of Motorized Trails in Recommended additions to the Selway- Bitterroot Wilderness	0	39.7	63.6	0
Miles of Mechanical Transport in Recommended additions to the Selway-Bitterroot Wilderness	0	67.8	67.8	0

The second issue involves over-snow vehicle use. Designating areas open to over-snow vehicle use may affect recreation experiences. The measurement indicator is the number of acres of areas recommended for wilderness open to over-snow vehicle use (Table 3.3-4), and how they affect wilderness attributes.

Table 3.3- 4: Acres of RWAs Open to Over-snow Use

	Alt.1	Alt. 2	Alt. 3	Alt. 4
Acres open to over-snow use in RWAs	0	73,809[1]	74,097[1]	0

[1] Some areas are subject to Special Closure Orders, and are not available for over-snow use

Refer to Appendix G of this FEIS, which shows the routes screened for the DEIS. Appendix H shows the changes to routes between the DEIS and the FEIS. Appendix I shows the proposed designations for all routes, including those that were not screened.

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in areas recommended for wilderness designation (RWAs) impacts their wilderness attributes

Indicator: Miles of motorized routes in RWAs
Indicator: Effects to wilderness attributes

Effects Common to All Action Alternatives

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with wilderness attributes. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1
The RWA includes portions of the Selway-Bitterroot IRA and the western side of the Blue Joint IRA. When compared to **Alternative 2,** the miles of motorized trails in **Alternative 1** decrease from 39.7 to 0, and miles of mechanical transport (bicycles) decrease from 67.8 to 0. The open roads in recommended wilderness remain at 0 in **Alternative 1.**

In the Selway-Bitterroot RWA (which includes Blue Joint Creek), there would be no trails open to motorized or mechanical recreation; ATVs, motorcycles, and bicycles would no longer be allowed on trails. While motorcycles and bicycles may not always have physical impacts on the landscape, prohibiting their use, along with motorized vehicles, from RWAs acknowledges there are other, social effects to Wilderness attributes associated with these types of uses. This action would protect the existing high value of the areas for providing primitive recreation experiences, and ensure the area retains its wilderness qualities.

Although motorized use (summer and over-snow) and bicycle use is not extensive in the RWAs, these uses are beginning to increase, and the public that expressed a desire to have those trails open to motorcycles and mountain bikes, may now feel some of their experience has been affected.

Prohibiting all motorized and mechanical transport use would ensure that long-term ecological processes remain intact and operating because the areas would not be subject to current or future ground disturbance associated with motorized vehicles. These areas would appear more undeveloped than at present because the sights and sound associated with motorized use would not occur.

The opportunity to use these trails would not be lost; visitors could still hike or horseback ride on these trails.

The opportunity for solitude, isolation from sights, and the lack of presence of others would be greater in **Alternative 1** compared to **Alternative 2** because all of the area would be restricted from motorized use/mechanical transport.

There would be no motorized wheeled access for dispersed camping in RWAs in **Alternative 1** on the Forest.

Alternative 2

Under **Alternative 2,** the miles of open road remain the same at 0, and the miles of motorized trails remain the same at 39.7, with the miles of mechanical transport (bicycles), remaining at 67.8 miles. All trails within the RWAs, including those leading to Designated Wilderness, would continue to be open to motorized/mechanical transport use. The trails in the RWAs are primarily used by pack and saddle stock and hikers, with less use by motorcyclists and bicyclists. Since the trails are snow covered, thus, indiscernible in the winter, there is little trail use by winter recreationists.

The following trails would remain open to motorcycles yearlong: Bear Creek Overlook Trail #126, Sheephead Creek #142, Boulder Point Lookout Trail #247, Mill Creek Trail #364, Bear Creek Trail #5, Chaffin Creek Trail #528, Kootenai Creek Trail #53, Jack the Ripper Trail #137, Deer Creek Trail #139, Blue Joint Trail #614, and Castle Rock Trail #627. Trails open to motorcycles are short, because they are closed at the wilderness boundary. No trails are open to ATVs, and very few provide loop opportunities. One exception is the Blue Joint Trail #614, which when linked up with Razorback Ridge Trail #106, Chicken Creek Trail #138, or Little Blue Joint Trail #223, and then combined with various road segments, provides nice loop opportunities, popular with the more experienced motorcycle rider.

Where motorized/mechanical transport use occurs, it can adversely affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanical form of travel that was not available in historic times. This use can affect the primitive character of the area. The noise associated with motorized use can affect the feeling of solitude.

Opportunities for solitude are limited on moderate-to-heavily used trails such as Bass Creek #4, Blodgett Creek #19, Kootenai Creek # 53, and Mill Creek #364, with more opportunity for solitude on Sawtooth #123, Watchtower # 699, and Sheephead Creek #142. The opportunities for solitude are best off-trail where vegetation and topographic screening are present. Off- trail opportunities for hiking, hunting, backcountry skiing, and rock climbing provide a higher degree of challenge and risk and less encounters with other users,

The current management direction that allows motorized wheeled vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**.

Alternative 3

When compared to **Alternative 2**, the miles of motorized trails in **Alternative 3** are increased from 39.7 to 63.6, and the miles of mechanical transport (bicycles) stays the same as **Alternative 2** at 67.8 miles. There would be no roads open to motorized/mechanical transport use.

In the Selway- Bitterroot and Blue Joint RWAs, trails would remain open to motorized travel (motorcycles) and mechanical transport (bicycles). Those trails in the Selway-Bitterroot additions and the Blue Joint area do see some use, and the public has expressed a desire to have those trails open to motorcycles and mountain bikes. This action would not prevent non-conforming uses from being established, as well as not protecting the high value of the area for providing primitive recreation.

Alternative 3 increases the trail miles available to motorcycles/bicycle riders where those trails occur in RWAs over **Alternative 2**. This action, while enhancing the motorized/mechanized transport users' experience, would not prevent non-conforming uses from being established, as well as protecting the high value of the area for providing primitive recreation.

In response to many comments received on the DEIS, the criteria that "No motorized vehicles or mechanical transport [will be] allowed in Designated Wilderness and Recommended Wilderness" has been changed for **Alternative 3**. This alternative positively affects motorized users by increasing the trail miles in RWAs/IRAs available to motorcycles to 63.6 miles compared to 39.7 miles in **Alternative 2**. Miles of trails open to mechanized transport would remain the same as in **Alternative 2** at 67.8 miles.

Alternative 3, to a greater degree than **Alternative 2**, does not acknowledge there are other social effects to Wilderness attributes associated with these types of uses. Trails within RWAs/IRAs (with the exception of Baker Lake #234 and Soda Springs #250), leading to Designated Wilderness, would continue to be open to motorized/mechanical transport use, which can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of the area. The noise associated with motorized use can affect the feeling of solitude.

For **Alternative 3**, motorized wheeled access for dispersed camping would be allowed in the RWAs.

Alternative 4

Compared to **Alternative 2,** the miles of motorized trails in recommended wilderness under **Alternative 4** decrease from 39.7 to 0, and the miles of mechanized transport (bicycles) decrease from 67.8 to 0. The open roads would remain at 0 in **Alternative 4.** There would be no trails open to motorized or mechanical transport (including bicycles). While motorcycles and bicycles may not always have physical impacts on the landscape, prohibiting their use, along with motorized vehicles, from RWAs acknowledges there are other, social effects to Wilderness attributes associated with these types of uses. This action would protect the existing high value of the areas for providing primitive recreation experiences, and ensure the area retains its wilderness attributes.

Although motorized use (summer and winter) and bicycle use is not extensive in the RWAs, the use is beginning to increase, and the public that expressed a desire to have those trails open to motorcycles and mountain bikes may now feel some of their experience has been affected.

Restricting all motorized (summer and over-snow) uses and restricting bicycle use would ensure that long-term ecological processes remain intact and operating because the areas would not be subject to ground disturbance associated with motorized vehicles. These areas would appear more undeveloped than at present because the sights and sound associated with motorized use would not occur.

Alternative 4 would displace single track motorized/mechanical (bicycle) users by decreasing the miles available in RWAs, but would ensure the areas retain their wilderness attributes. The opportunity to use these trails would not be lost; visitors could still hike or horseback ride on them.

The opportunity for solitude, and isolation from the sights and the lack of presence of others, would be greater in **Alternative 4** compared to **Alternative 2** because the RWAs would be restricted from motorized use/mechanical transport.

Hikers and stock users desiring nonmotorized cross-country travel to remote destinations, free from noise and vehicle pollution, would not encounter motorized vehicles unless those users were violating the designation.

There would be no motorized wheeled access for dispersed camping in the RWAs in **Alternative 4**.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of RWAs open to over-snow vehicle use and effects to wilderness attributes

Effects Common to Alternatives 2 and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Wilderness attributes would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on wilderness attributes are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating is increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1

Alternative 1 does not allow for over-snow vehicle use in the RWAs, a reduction of 73,809 acres compared to **Alternative 2**. The primary effects on wilderness attributes are to natural integrity, related to reduced stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and increased opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are less, which enhances those opportunities for solitude.

Nonmotorized users would be able to utilize the entire Forest for over-snow recreation; however, approximately 1,030,696 acres on the Forest would be available exclusively for nonmotorized over-snow opportunities.

Due to visitors coming into the Bitterroot National Forest and the Bitterroot Valley to ride, and by reducing the miles of motorized routes, the potential for motorized intrusions into the RWAs could increase throughout the nonmotorized over-snow areas within this alternative. This could increase the need for additional law enforcement patrols in these areas.

Alternative 2

Under **Alternative 2,** approximately 73,809 acres within the RWAs would remain open to over-snow vehicle use. **Alternative 2** permits over-snow vehicle use to continue, though it is Wilderness non-conforming use; if these areas are designated wilderness, the use would be curtailed.

Nonmotorized users can utilize the entire Forest for over-snow recreation. Approximately 846,163 acres on the Forest would be available exclusively for nonmotorized over-snow opportunities.

Alternative 3

Under **Alternative 3,** 74,097 acres would be available for over-snow use, a 288 acre increase compared to **Alternative 2**.

Under **Alternative 3**, over-snow vehicle use is not prohibited in RWAs unless closed by special order.

Alternative 3 permits winter over-snow use to continue, though it is a Wilderness non-conforming use. If and when, this area is designated, wilderness the use would be curtailed.

Nonmotorized users can utilize the entire Forest for over-snow recreation; however, approximately 841,484 acres on the Forest would be available exclusively for nonmotorized over-snow opportunities. Finding quiet, untracked areas to recreate in could be more difficult for nonmotorized users with this alternative.

Alternative 4

Alternative 4 does not allow for over-snow vehicle use in the RWAs, a reduction of 73,809 acres compared to **Alternative 2.** The primary effects on wilderness attributes are to natural integrity, related to reduced stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and increased opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are less which enhances those opportunities for solitude.

Nonmotorized users would be able to utilize the entire Forest for over-snow recreation; however, approximately 1,234,706 acres on the Forest would be available exclusively for nonmotorized over-snow opportunities in **Alternative 4.** Many nonmotorized over-snow users do not want to share the same settings with motorized over-snow users because of the associated exhaust smells, noise, loss of solitude, and safety concerns with fast moving vehicles. All are seeking settings that meet the specific recreation interest and needs.

The reduction in available motorized acres with **Alternative 4** addresses concerns associated with noise and safety related to motorized and nonmotorized use in the same area. Although they would be less in **Alternative 4** than the other action alternatives, noise impacts caused by over-snow vehicle use would continue.

Due to visitors coming into the Bitterroot National Forest and the Bitterroot Valley to ride, and by reducing the miles of motorized routes, the potential for motorized intrusions into RWAs and Designated Wilderness could increase throughout the nonmotorized over-snow areas within this alternative. This could increase the need for additional law enforcement patrols in these areas.

Summary

Summer

None of the alternatives would designate any miles of roads open to motorized/mechanical transport. **Alternatives 1** and **4** would not designate any miles of trails for motorized or mechanical transport. **Alternative 2** would designate 39.7 miles of motorized trails and 67.8 miles for mechanical transport, while **Alternative 3** would designate 63.6 miles of motorized trails and 67.8 miles for mechanical transport.

All alternatives would have a positive impact on wilderness attributes as they would not designate any miles of roads open to motorized/mechanical transport. **Alternatives 1** and **4** would have the most positive impact on wilderness attributes as they, additionally, would not designate any miles of road or trails open to motorized/mechanical transport. **Alternative 3** would have the greatest adverse impact by designating motorized use on 63.6 miles of trails, followed by **Alternative 2,** which would designate motorized use on 39.7 miles of trails.

The quality of the experience for those seeking nonmotorized recreational activities would have the greatest potential to be enhanced under **Alternative 4**. Due to the amount of nonmotorized areas proposed, coupled with the Designated Wilderness, recommended wilderness, and WSAs on the Forest, it is expected that those desiring a nonmotorized experience would be able to meet their expectations.

Alternatives 1 and 4 negatively affect motorized and mechanized transport users by closing the miles of trail available to motorcycles/bicycle riders where those trails occur in RWAs. This would ensure that long-term ecological processes remain intact and operating because the areas would not be subject to current or potentially increased future ground disturbance associated with motorized vehicle in particular. This area would appear more undeveloped than at present because the sights and sound associated with motorized use would not occur. This would protect the existing high value of the areas for providing primitive recreation experiences and ensure the area retains its wilderness qualities.

Under **Alternatives 1** and **4**, a decrease in the miles of routes available for motorized use has the potential to increase conflict of uses between motorized and nonmotorized uses, to concentrate uses, and to displace some users, depending upon the use the area receives, which has the potential to impact some visitors' recreation experiences. By concentrating motorized activities in smaller areas, it is reasonable to expect that the noise levels would increase in those concentrated use areas, and decrease elsewhere. Individuals that are displaced that may have a strong personal connection to these areas are likely to feel adversely impacted. Users desiring off-road opportunities would experience changes with the closure of unauthorized routes and routes closed for resource reasons.

On the other hand, decreasing the miles of routes for motorized use increases the miles available for nonmotorized uses, providing for additional quiet areas. Fewer road miles and larger nonmotorized areas would provide a greater potential to meet the experiences sought by nonmotorized users.

Nonmotorized users would be able to hike, horseback ride, and bicycle on motorized routes, and could expect encounters with motorized vehicles. Providing a quiet, nonmotorized opportunity requires a sufficient block of land to buffer noise from adjacent lands that may be providing motorized recreation opportunities. Large quiet areas enhance the recreation experience for many user groups such as hunters, fisherman, hikers, stock users, and mountain bikers. These areas allow the user to experience solitude and quiet in a more remote recreation setting. Many nonmotorized recreation users feel their expectations for a quiet recreation experience cannot be met in areas where motorized recreation occurs.

Over-Snow

Alternatives 1 and **4** would not allow over-snow vehicle use on any acres, followed by **Alternative 2** (73,809 acres), and **Alternative 3** (74,097 acres).

Alternatives 1 and **4** would have the most positive impact on wilderness attributes as there would be no acres open to over-snow vehicles. **Alternative 3** would have the greatest adverse impact, as it would allow over-snow vehicle use on 74,097 acres, followed by **Alternative 2**, with 73,809 acres.

C. Wilderness Study Areas

Blue Joint Wilderness Study Area

Introduction

The Montana Wilderness Study Act of 1977 (MWSA) (PL 95-150) required the study of certain lands to determine their suitability for designation as Wilderness in accordance with the Wilderness Act of 1964. These lands are referred to as wilderness study areas (WSA). One of the nine areas identified in the MWSA was the 65,329 acre Blue Joint Wilderness Study Area located on the Bitterroot Forest (64,839 acres) and the Salmon (now the Salmon-Challis National Forest, 490 acres). For the study, the Sapphire WSA was grouped with the Blue Joint (Bitterroot National Forest) Wilderness Study Area. After study, analysis, and evaluation of public comments, the Blue Joint and Sapphire Wilderness Study Areas Report and Draft Environmental Impact Statement were completed in 1985 (USDA Forest Service 1985). This report was the administrative recommendation to Congress for the land allocation and management of the area. The report recommended that 27,501 acres of the Blue Joint Wilderness Study Area be managed as wilderness. Congress has not yet acted on the recommendations contained in the report.

Language in the 1977 Act required that the areas be managed to maintain their presently existing wilderness character and potential for inclusion in the National Wilderness Preservation System. In 1996 the Montana Wilderness Association filed an eleven count complaint that this part of the Act had been violated. Four counts were carried forward to decision; the others were dismissed or were considered superfluous. On May 20, 2001, U. S. District Court Chief Judge Molloy made a ruling that ordered one count dismissed and had orders for the remaining count.

Count I (the remaining count) alleged that the actions and inactions of the Forest Service resulted in substantially increased motorized use of the WSAs, which resulted in increased environmental damage, all in derogation of their potential for wilderness designation and Congress' management mandate.

Judge Molloy enjoined the Forest Service from taking any action that would diminish the wilderness character of a WSA as it existed in 1977, or that diminished the area's potential for inclusion in the National Wilderness Preservation System. He further ordered that the Forest Service should take reasonable steps to restore the wilderness character as it existed in 1977 if the areas' wilderness character or its potential for inclusion in the National Wilderness Preservation System has been diminished since 1977. To determine if any changes had occurred, the Forest Service decided to make an assessment by comparing the conditions that existed in 1977 and the present time.

In March 2007, the Forest Service, the Montana Wilderness Association, West Fork Property Owners, Blue Ribbon Coalition, and other entities entered into a settlement agreement regarding the 1996 complaint. All parties agreed that the new travel management plans would address management of the WSAs. The agreement states that the travel management decisions shall address summer and winter use of trail and off-trail areas within each WSA, based upon applicable law and policy including policy currently set forth in FSM Section 2329; and that pending completion of the travel management plans for the WSAs, the Forest Service shall manage the WSAs in accordance with applicable law and policy including but not limited to the Montana Wilderness Study Act PL 95-150;91 Stat 1243 (1977) and FSM Section 2329 {Project File folder 'public_involvement_pre-nepa_2005-09-2007,' Project File document PUBLIC-064.pdf}.

In September 2008, a Region 1 supplement to the Forest Service Manual was published which provided clarification of the management of wilderness study areas {Project File folder 'wilderness_study_areas,' Project File document WSA-013.pdf}. Forest Service Manual id2300-2008-1, Section 2329 (Management of Wilderness Study Areas) states:

1. Manage Montana Wilderness Study Areas (MWSA) to maintain wilderness character as it existed at time of designation (1977) and potential for inclusion of the area in the National Wilderness Preservation System (NWPS).
    a. when making project level decisions (for example, trail maintenance, relocation, improvement, construction and reconstruction…the line officer must consider the effect of the decision on the wilderness character as it existed in 1977 (See 2329 Exhibit 1 for definition of wilderness characteristics).
    b. If wilderness characteristics have been degraded; restore the area to 1977 conditions. That is, if a trail was single track and has evolved into two-track, close the trail to two-track use and restore to single track use, or allow natural restoration where effective. If conflicting uses are occurring, consider separating the users geographically through an appropriate planning process. That is, identify areas for snowmobiling and areas for cross-county skiing and snowmobiling.
    c. Trails should not be upgraded to a more-developed standard than existed in 1977.
    d. Pursuant to 36 CFR 212.52(2), the line officer shall institute closure of a trail in a Wilderness Study Area if use is causing or will cause considerable adverse effects on resource values referred to in Sec. 212.52(2), until the effects are mitigated or eliminated.

When discussing management of existing uses it says at the time of designation of the areas, uses that existed in 1977 can be allowed to continue subject to 36 CFR 212.57. If increases in amount of use occur, the line officer should consider how the increases affect wilderness character and the area's potential for inclusion in the NWPS. If negative effects are noted, implement actions as described in 1.b. of this policy.

Within the discussion of new uses or activities, the R1 Supplement states, "c. All-terrain vehicles (ATVs) and motor bikes may be allowed on roads that had jeep use in 1977 (two tracks); d. Mountain bikes may be

allowed on trails that had established motor-bike use in 1977, or on non-motorized trails as long as the aggregate amount of mountain bike and motorcycle use maintains the wilderness character of the WSA as it existed in 1977 and the area's potential for inclusion in the National Wilderness Preservation System" {Project File document WSA-013.pdf}.

The Supplement further instructs "Forests and grasslands shall monitor WSAs to ensure that the wilderness character is not diminished beyond what existed in 1977 and to ensure that the areas are maintained for the potential inclusion in the NWPS. Monitoring WSAs will be covered through the encompassing monitoring program for the Land and Resource Management Plan (LRMP)" {Project File document WSA-013.pdf}.

The wilderness character of the Blue Joint WSA has been assessed and described many times over the last thirty-six years. These studies include the RARE I study in the early 1970s, RARE II in 1979, the Report and Draft Environmental Impact Statement, Blue Joint and Sapphire Montana Wilderness Study Act Areas in 1985, the Bitterroot National Forest Plan, and the Blue Joint Wilderness Study Area Wilderness Character Assessment, January 2003) {Project File document WSA-009.pdf}. This assessment was expanded upon combing the conditions in 2003 to the current existing condition and is included as part of this analysis

1977 Wilderness Character

Establishing the "wilderness character" of the 64,168-acre Blue Joint WSA as it existed in 1977 is no small task. Both sides of the issue, wilderness advocates and motorized use advocates, have their own opinions and recollections as to the conditions in the area at that time. To help establish some meaningful comparison of conditions in 1977 and in 2013 a number of old records were research to establish a basis for analysis. Much of the information applies to both the 64,168-acre WSA and the adjoining 671 acre IRA.

In 1972 the Forest Service embarked on a nationwide evaluation of roadless areas within the National Forest System to identify and recommend suitable areas for wilderness designation. The first effort was called the Roadless Area Review and Evaluation process, and later became known as RARE I. The objective of RARE I was to select roadless areas for further study as potential candidates for Wilderness. The RARE process utilized the Wilderness Attribute Rating System (WARS) to assess wilderness characteristics, and focused on four distinct factors identified in the 1964 Wilderness Act of 1964 – *natural integrity, apparent naturalness, opportunity for solitude, and opportunity for a primitive recreation experience*. A numerical rating from one to seven was assigned to each factor. On January 10, 1978 a wilderness quality index for the Blue Joint IRA was determined; it received a WARS rating of 26 (out of a possible score of 28) for wilderness attributes (USDA Forest Service 1978b) {Project File folder 'material_referenced,' Project File document REFERENCE-001.pdf}.

Between 1985 and 1987, the Bitterroot National Forest prepared the Report and Draft Environmental Impact Statement, Blue Joint and Sapphire Montana Wilderness Study Act Areas in 1985, and the Bitterroot National Forest Plan (1987) in response to Congressional direction to evaluate the areas for their wilderness potential. This analysis included lands identified in the statute as the Blue Joint WSA, as well as other inventoried roadless lands adjoining the WSA. The 1987 FEIS recommended 28,500 acres in Blue Joint Creek. This parcel is contiguous with the Frank Church-River of No Return Wilderness, and is part of the Blue Joint Wilderness Study area, Montana Wilderness Study Act, P.L. 95-150.

In January of 2003, the Blue Joint Wilderness Study Area Wilderness Character Assessment was completed to help gather what information was available regarding the 1977 wilderness character of the Blue Joint WSA. This assessment was expanded upon combining the conditions in 2003 to the current existing condition, and is included as part of this analysis {Project File document WSA-009.pdf}.

Additional information on roads and trails, and how visitors choose to recreate in the Blue Joint area, was found in the Bitterroot National Forest Plan FEIS, Appendix D-Response to Comments (USDA Forest Service 1987b). Also, the Forest Plan Appendix K-10, Forest Travel Plan – November, 1976 and Forest Plan FEIS, Appendix 1- Public Involvement Summary {Project File document REFERENCE-001.pdf};

and "Results of Research on Volume of Use for the Sapphire and Blue Joint Wilderness Study Areas" {Project File document WSA-023.pdf}.

Various monitoring efforts have been conducted in the Blue Joint area throughout the years, and information from those studies helped contribute to the expansion of the assessment on wilderness character that follows. These include; "A Study Report to the Wilderness Institute School of Forestry," University of Montana November 1974 by Fred Swanson {Project File document WSA-019.pdf}. In 2008, the Bitterroot Quiet Use Coalition 2008 Monitoring Report {Project File document WSA-029.pdf}. Also in 2009, the Bitterroot National Forest coordinated with the Wilderness Institute at the University of Montana to do some wilderness character monitoring in the Blue Joint {Project File document WSA-011.pdf}. In addition, in April 2012, an analysis of regional and national recreation –use data was conducted to help establish the historic volume of use in the Blue Joint at the time it was established in 1977. This is documented in a study titled "Estimating motorized and mechanized use change in the Blue Joint Wilderness Study Area from 1977 to 2009, an aid for evaluating change in Wilderness Characteristics" {Project File document WSA-003.pdf} and workbook/spreadsheets supporting the Blue Joint Wilderness Study Area Assessment {Project File document WSA-005.pdf}. The information from these reports helped provide a clearer understanding of the existing condition prior to 1977, when the area was established as a WSA, and also assessed any changes that have occurred since that time.

Other useful information came from old maps and files. In the 1960s and early 1970s, the Forest Service used "Timber Type maps" as the basis for mapping roads, trails, and other features. Starting in 1970, USGS topographic maps became more common as the basic map for showing roads, trails, and other features.

Blue Joint WSA: Description and Affected Environment

This inventoried roadless area (which contains the WSA) is identified by numbers 01941 (Bitterroot Forest) and 13941 (Salmon Forest). Roadless area acreage is shown in Table 3.3-5:

Table 3.3- 5: Roadless Area Acreage for Blue Joint WSA

National Forest	1977 Roadless Area Acres	Added to Wilderness (1980, P.L.96-312[1])	Refined Acreage Calculation	Net Acres
Bitterroot	126,500	65,100	65,370	65,370
Salmon	19,905	19,415	490	490
Total	**146,405**	**85,005**	**65,860**	**65,860**

(Acres displayed in this table are from the 1987 Forest Plan, FEIS, Volume II, and will differ slightly from GIS analyses which is used throughout the FEIS).

The Montana Wilderness Study Area is slightly smaller than this net acreage (see Figure 3.3- 1). It excludes the Salmon National Forest portion in Idaho as well as a small area along the boundary from Blue Joint Creek north towards Bare Cone.[2] The area is entirely National Forest. "The roadless area is located in the Bitterroot Mountains in southwestern Ravalli County in western Montana with a small portion in Lemhi County, Idaho. Hamilton, Montana is about 45 air miles to the north and Salmon, Idaho is 40 air miles to the south" (USDA Forest Service 1987b, pg C-19). Access is provided to many points along the boundary

[1]Frank Church–River of No Return Wilderness as designated in the Central Idaho Wilderness Act of 1980

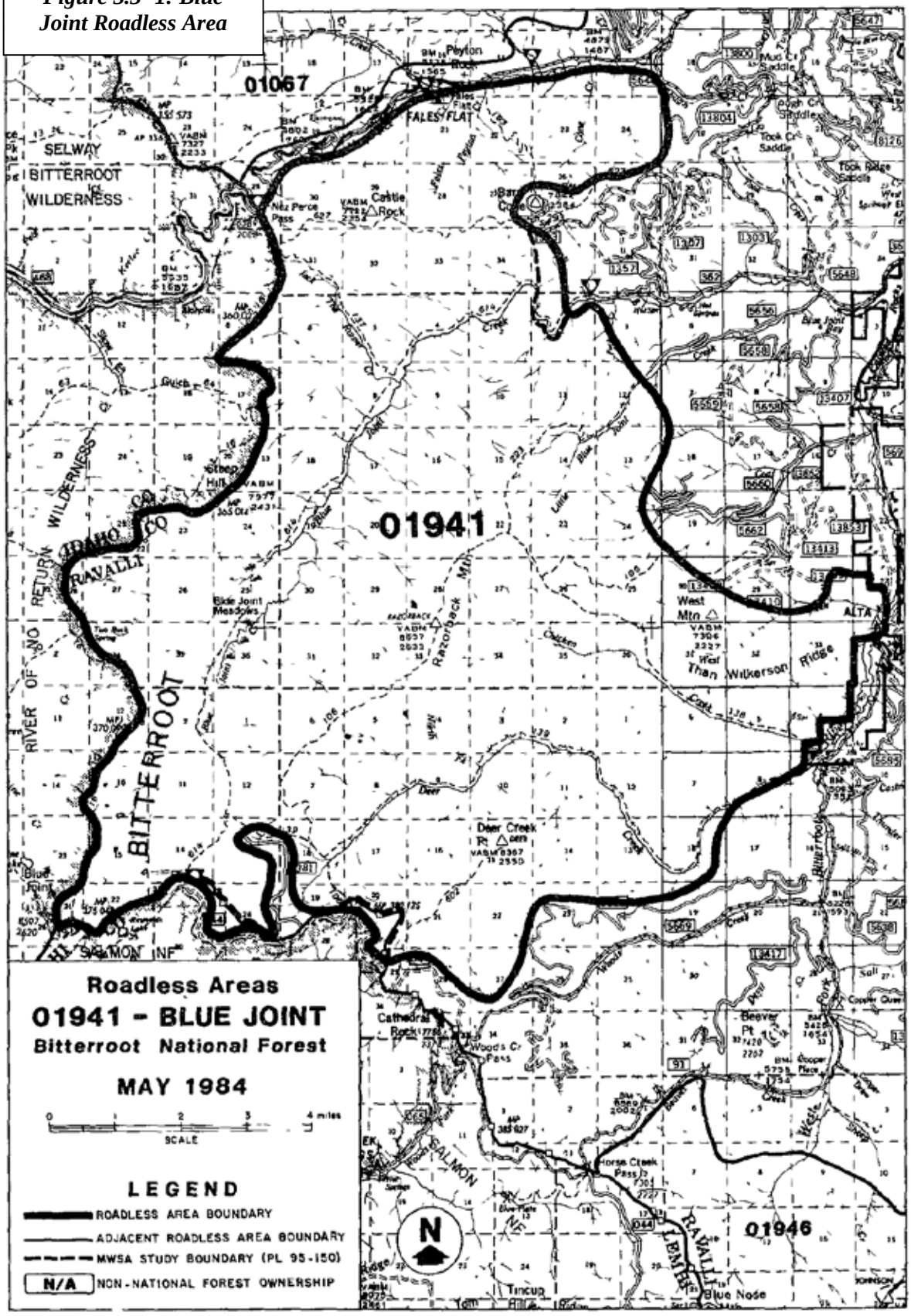
[2] Montana Wilderness Study Act Area Descriptions, January 3, 1980; R. A. Strong as corrected by Forests describes the Blue Joint MWSA as 61,400 acres. This appears several thousand acres short compared to both the Forest Plan and GIS versions of the roadless and WSA maps.

by Forest roads, which tie in with U.S. Highway 93, some 20 miles to the northeast. Within the area, a *ne*twork of ten[3] trails provides access along major drainages and ridgetops.

Blue Joint is a triangular-shaped area running 13 miles north and south, ranging in width from 4 to 13 miles. The west side borders the Frank Church-River of No Return Wilderness in Idaho for about 17 miles. The rest of the boundary is defined by roads, primarily the West Fork Road and extensions from it. The Nez Perce Trail Road defines the northern boundary separating this area from the adjacent Selway-Bitterroot Wilderness and contiguous roadless lands. Likewise, the Reynolds Lake Road defines the southern boundary, separating the area from that portion of the Frank Church-River of No Return Wilderness in the headwaters of Reynolds Creek. Seventy-five percent of the boundary is well-defined by topographic features such as ridgetops or streams, and the remainder is at mid slope above roads and/or timber harvest.

[3] Original document said eight. No new trails have been built, but what is now Trail 138 (Chicken Ck) does not appear to have had a unique number on the 1977 Travel Map. It may have been considered part of Trail 223. The other "missing" trail is probably Trail 16, which generally follows the western boundary in and out of the Frank Church-River of No Return Wilderness.

Figure 3.3- 1: Blue Joint Roadless Area



Elevations range from 4,900 to 8,600 feet. The area is generally a high, mountainous region with 50 percent of the area over 7,000 feet. Razorback Ridge and Razorback Mountain, dominant features, divide the area into northwest and southeast portions. Blue Joint Creek, by far the largest stream, drains the northwestern segment, and Chicken, Deer, and West Creeks drain the southeast. Stream bottoms are generally narrow with sideslopes rising steeply to narrow ridges. Slopes on more than one-half of the area are in excess of 60 percent, thereby confining most use to stream bottoms or ridgetops.

The area is forested or forest land, except for the unique large meadows in the headwaters of Deer and Blue Joints Creeks, dry south-facing slopes, and rock rubble and grassy balds at higher elevations. In 2000, high and moderate severity wildfire burned much of the Chicken, West, Coal, and Little Blue drainages.

Tree species are predominantly Douglas-fir and ponderosa pine on the warmer, lower elevation site, and lodgepole pine on cooler sites at midslope. Near the top of the higher ridges, whitebark pine is a dominant species. Ground cover is primarily pine grass, snowberry, and ninebark at lower elevations, and beargrass or grouse whortleberry on higher, cooler sites. In the Blue Joint drainage, forest fires in the late 1800s burned over most of the area. Today, stands of small lodgepole pine cover this portion contrasting with the rest of the area.

The 1987 Forest Plan for the Bitterroot National Forest identified seven management areas (MA) within this study area. Over seventy-five percent of the area was recommended as wilderness, allocated for semi-primitive recreation, or otherwise designated as unsuitable for timber harvest (MA 6, 5, 8a respectively).

Management Area 5 states in 111-37, (1*) manage for recreation activities associated with roadless areas, including hiking, hunting, fishing, camping, motor-biking and snowmobiling.* It goes on to say in (2), *the travel plan will identify the areas, trails and roads open for motorized vehicle use and the types of vehicles that are permitted. Motorized use will not be permitted where wildlife, adjacent wilderness, soil and water resources or public safety are threatened.*

Management Area 6 states in III-41, 3.a. Recreation (1) Maintain existing primitive and semi primitive settings (1987). Manage the area essentially free from evidence of human restrictions and controls; (3) Continue current uses which do not detract from wilderness values. Transitory uses such as chainsaws, trailbikes and snowmobiles are appropriate if permitted by the Forests Travel Plan.

Management Area 8a states in III-58, 3.a. Recreation (1) Manage for ROS setting and recreation activities associated with adjacent management areas; (2) Maintain trails and roads that pass through these units for recreation use unless closure is required to meet other resource standards; (3) Pending resolution by Congress, that portion of the management area within the boundary of the Montana Wilderness Study Act areas will be administered according to the goals and standards established for management area 6.

The recommended wilderness includes all of the Blue Joint Creek drainage. Much of Deer and Chicken Creeks, as well as the small drainages north of Castle Rock and Bare Cone, were designated for semi-primitive recreation. Being a programmatic decision, the Forest Plan did not directly affect wilderness character.]

Assessment of Wilderness Characteristics.

In his May 2001 order, Judge Molloy mentions that the Wilderness Attribute Rating System (WARS) provides a benchmark for prospective management and specific criteria to guide the agency's exercise of its discretion.

WARS were developed in 1977 by the Forest Service to identify and evaluate wilderness character, and were used in early 1978 to evaluate all 1,920 inventoried roadless areas in the Nation. Using WARS, the Blue Joint and Sapphire Study Report and Draft Environmental Impact Statement, and other information helps establish a 1977 benchmark. These references are also helpful to measure the amount of change from 1977.

WARS is based on four attributes derived from language in the Wilderness Act of 1964: *natural integrity, apparent naturalness, outstanding opportunities for solitude*, and *outstanding opportunities for primitive recreation.* In addition, the system provides for rating four supplemental attributes*: outstanding ecological, geological, scenic, and historic features.* These do not pertain to wilderness attributes, and will not be used in this assessment.

In WARS, *natural integrity* and *apparent naturalness* are closely related, and use the same rating components. These components include physical developments, mineral developments, recreation, grazing, wildlife management, vegetative manipulation, insect and disease control, non-indigenous plants and animals, fire history, air pollution effects, water pollution, unimproved roads, and occupancies. Ratings are based on the effect of an impact, the percent of area impacted, and the duration of the impact.

Likewise in WARS, *opportunities for solitude and primitive recreation* are closely related, and use some of the same components. Mutual components used are size of the area, presence of topographic screening, vegetative screening, and distance from the perimeter to the core. Additional rating components for *opportunities for primitive recreation* are diversity of opportunity, challenge (hazardous things like dangerous animals and cliffs), and absence of man-made facilities (USDA Forest Service 1977).

A review of the rating components of WARS and other information was used to assess changes in the Blue Joint WSA between 1977 and 2012. From this, a comparison was made how physical features and type of use has changed over time.

Natural Integrity

Natural integrity is the extent to which long-term ecological processes are intact and operating. Impacts to natural integrity are measured by the presence and magnitude of human induced change to an area. Such impacts include physical developments (roads, utility rights-of-way, fences, lookouts, and cabins), recreation developments, domestic livestock grazing, mineral developments, wildlife/fisheries management activities, vegetative manipulation, and fire suppression activities).

Activities that have significantly altered natural processes on the Blue Joint WSA are minimal and are located just inside the eastern and southeastern boundaries[4]. These include all or portions of seven timber cutting units from the late 1960s and 1970s totaling about 190[5] acres, and 3 miles of associated access roads. The fires of 2000 burned over the plantations and roads in the Coal Creek area. The effect was to wash out much of the residual effects of the past cutting units, but at the same time opened and re-exposed roadbeds which were otherwise brushing over. The boundary could be defined to exclude these impacts.

There is a 3/4-mile fire road in the extreme headwaters of Blue Joint Creek, which was constructed in 1962[6]. This was passable by full size vehicles in 1977, but has since been allowed to become impassable by the growth of trees and brush in the roadbed.

There is about 1 mile of dozer-constructed trail in lower Blue Joint Creek which also serves as the trail tread for Trail #614. Full size vehicles were able to use this segment in 1977. It has since been allowed to brush in to standard ATV width, physically restricting full size vehicle use.

These impacts are readily apparent to any visitor when onsite; however, the remainder of the area appears natural. The roads have altered natural processes, but cutting units will continue to recover to nearly natural conditions over time.

Other, more minor non-conforming developments existed or exist in the area. The Deer Creek Range Allotment was terminated in 1990, reducing authorized grazing and associated. There are no current range

[4] 1977 RARE II WARS rating sheet and supporting maps
[5] Original report says 170 acres. The current data lists these same stands as 190 acres total.
[6] Listed as road 044 on the 1977 travel map.

allotments within the WSA. Old outfitter corals, hitch racks, and pit toilets at Blue Joint Meadows have been removed. Most of the abandoned telephone line on Razorback Ridge has been removed. The Deer Creek irrigation ditch in northwest section 9 was converted to a buried pipeline and revegetated.

In 1977 there were 15 mining claims. Three 1.75" exploratory holes were drilled in 1992; the holes were plugged and Pegasus Gold Corporation dropped their lease on the mineral claims.

Large fires occurred in the 1870s, 1880s, 1910, 1930s, 1940s, 1960s and 1970s, becoming generally progressively smaller in later decades. Large fires also occurred during the 1990s and 2000. The policy now in place allows fire to play a more natural role in this portion of the WSA.

Similarly, all fire suppression strategies now consider the use of Minimum Impact Management Tactics. These were used in containing the Little Blue fire in 2000, reducing the overall impacts of actual fire suppression tactics from what would likely have occurred in fighting this fire in earlier years.

Fire-related effects include high, moderate, and low severity burns and associated mortality in Little Blue Joint, Coal West, and Chicken Creek drainages, debris slide in Chicken Creek, large reduction in fish populations in Chicken and Little Blue Joint Creeks (presumably short term) {Project File folder 'forest_plan_and_monitoring,' Project File document FPMON-022.pdf}

(2009 Wilderness Institute Monitoring): Seventy-three infestations containing seven know noxious weed species and covering more than 70 acres were reported. The primary disturbances with mapped weed patches were associated with trails (74%), but also associated with burned acres (68%), which is partly a reflection of sampling bias. Nonetheless, the data clearly show that weeds commonly occur in close proximity to trails, and areas of disturbance and that these serve as important vectors for overall weed dissemination (p.16){Project File document WSA-011.pdf}.

Apparent Naturalness.

Apparent naturalness means that the environment looks natural to most people using the area. It is a measure of the importance of visitors' perceptions of human impacts to the area. Even though some of the long-term ecological processes of an area may have been interrupted, the landscape of the area generally appears to be affected by the forces of nature. If the landscape has been modified by human activity, the evidence is not obvious to the casual observer, or it is disappearing due to natural processes.

The impacts of timber sale cutting units just inside the eastern and southeastern boundaries and the fire road and dozer trail in the Blue Joint drainage are readily apparent to any visitor when onsite, but are recovering. However, the remainder of the area appears natural. The roads have permanently altered natural processes, but cutting units will recover to nearly natural conditions in 20-30 years.

In 1977, there were 7.8 miles of road within the WSA, and in 2003 there were 6.8 miles of road open to motorized use compared to 3.3 miles today. Of those, 3.3 miles all are roads open yearlong.

In 1977, there were approximately 81.3 miles of single-track and 0 miles of two-track trails within the WSA. In 2003, there was an estimated 64.3 miles of single-track and 0 miles of two-track trails. There are now approximately 18.5 fewer miles of single-track trail than in 1977, and the two track trails remain at 0.

The Blue Joint Trail #614 commonly gets motorcycle use and has become popular with mountain bike riders. Other trails popular with mountain bike riders are Jack the Ripper #137, Razorback Ridge #106, Deer Creek #139, and Little Blue Joint #223. No trails are open to ATVs. Snowmobile use is in the eastern half of the area.

One mile of primitive road has been allowed to grow in, physically eliminating motorized use. 0.5 mile road width trail has been allowed to grow in, physically restricting motorized use from full sized vehicles (1977) to ATV-width today. Total motorized road and trail use reduced by approximately 18 miles since 1977.

(From 2009 Wilderness Institute Monitoring): Evidence of developments in 2009 include: 23 water bars, 7 cairns, 5 bridges, 2 water diversions,2 lookouts, 1 cabin, and 1 corral. Twenty-two signs were observed also {Project File document WSA-011.pdf}.

Opportunity for Solitude and Remoteness

Solitude is defined as being isolated from the sights, sounds, and presence of others and from the development and evidence of man. WARS focuses on those intrinsic features of roadless areas that offer users *outstanding opportunities for solitude*–size of the area, presence of topographic screening, vegetative screening, distance from the perimeter to the core, and the degree of permanent off-site intrusions perceived from the area. Noise and human density, though important to solitude, can be changed by management decisions, and are therefore not included in the WARS rating (e.g. by future closing or opening of trails or campsites, controlling uses, etc.) (USDA Forest Service 1977).

Remoteness is a perceived condition of being secluded, inaccessible, and out of the way. The physical factors that can create "remote" settings include topography, vegetative screening, distance from human impacts such as roads and logging operations (sight and sound), and difficulty of travel. A user's sense of remoteness in an area is also influenced by the presence or absence of roads, their condition, and whether or not they are open to motorized vehicles. Remoteness was not a wilderness quality factor rated in 1978, but is a factor considered since the mid-1990s in evaluating effects on roadless areas.

Size of Area

Size of the WSA in combination with other criteria is an important component of an area's overall potential for solitude. A large area has more potential for solitude than a small one (USDA Forest Service 1977). The four-part rating scale ranges from VERY LOW to HIGH. The original WARS rating for Size of Area is HIGH (80,000 acres or larger) (USDA Forest Service 1978c).

Topographic Screening

The assumption here is that diverse relative relief in the WSA enhances opportunities for solitude by increasing opportunities for screening (USDA Forest Service 1977). The four-part rating scale ranges from MINIMAL/NONE to HIGH.

The original WARS rating for topographic screening is HIGH (contains a diversity of highly dissected topography that easily screens people from one another within short distances) (USDA Forest Service 1978c).

Topographic screening in the WSA has not changed since 1977.

Vegetative Screening

This component represents the collective vegetative cover that offers opportunities for screening parties from one another. In areas where vegetative cover is heavy, the sight of other people is reduced (USDA Forest Service 1977). The four-part rating scale ranges from MINIMAL/NONE to DENSE.

The original WARS rating for vegetative screening is DENSE (most of the area has dense vegetation, which screens people from one another, even within a quarter mile, but there is sufficient opening to permit travel and camping without undue concentration) (USDA Forest Service 1978c).

Large fires occurred in the 1870s, 1880s, 1910, 1930s, 1940s, 1960s and 1970s, becoming generally progressively smaller in later decades. Large fires also occurred during the 1990s and 2000, removing vegetation in some areas, but when looking at the entire area, the overall vegetative screening remains still moderate-to-dense over all.

Distance from Perimeter to the Core

The distance from the perimeter of the roadless area to the core or approximate geographic center is a measure of the potential for solitude and escape from the evidence of man (USDA Forest Service 1977). The four-part rating scale ranges from LOW to OUTSTANDING.

The original WARS rating for distance from perimeter to the core was a HIGH (from 3 to 5 miles from the core to the perimeter) (USDA Forest Service 1978c).

Distance from the perimeter to the core of the WSA has not changed since 1977.

Permanent Off-Site Intrusions

This includes off-site evidence of man's activities likely to be seen, heard, or smelled by visitors from within the area such as from a transportation corridor (USDA Forest Service 1977). The three-part rating system ranges from MINIMAL/NONE to MANY.

The original WARS rating for permanent off-site intrusions was None (off-site intrusions perceptible, but relatively distant and generally not permanent. Some off-site intrusions are close-by, but generally not permanent) (USDA 1978c).

The northwest portion of the WSA is entirely enclosed by high ridges, and provides outstanding solitude. This feeling is enhanced by the many miles of the Frank Church-River of No Return Wilderness to the west and south. No permanent development, other than the trails themselves, can be seen or heard.

Solitude is somewhat less in the southeast portion. About 2 miles of road in Deer Creek, outside the area, form a roaded intrusion into the headwaters of that drainage. Distant views include roads and timber sale activity just outside the area.

Civilization appears close at hand along the northern and eastern boundaries and from that portion within Woods Creek.

Other nonconforming uses in 1977 that affected one's sense of remoteness and solitude included a minor amount of trail biking, snowmobiling, and use of chain saws for clearing trails and firewood cutting by hunters and campers. Today these uses continue, and have increased somewhat, along with the use of the area by all types of recreationists, but would still be considered a "minor" amount. Four-wheeled ATVs have replaced some of the historic trailbike and full sized vehicle use, but overall there are fewer miles of road, dozer-width trail, and standard trail open to these uses today than in 1977. Similarly, non-conforming use of mountain-bikes on the area's trails is not uncommon today, but was apparently unheard of in 1977. Cross-country motorized travel, which was allowable in 1977, is now legally restricted.

Overall, about 40 percent of the WSA continues to provide outstanding opportunities for solitude, another 40 percent provides moderate-to-high opportunities, and 20 percent provides low opportunities (USDA Forest Service 1987b, Appendix C).

(Bitterroot Quiet Use Report – 2008): Monitoring in 2008 of Trails #138 and #139, found no evidence of any motor vehicles accessing these trails {Project File document WSA-023.pdf}.

(2009 Wilderness Institute Monitoring): Three separate groups were encountered with two people each (two mountain bikers and 4 hikers/backpackers) {Project File document WSA-011.pdf}.

Opportunity for Primitive Recreation Experience

Outstanding opportunities for primitive recreation considers the sense of remoteness, closeness to nature, serenity, spirit of adventure, using outdoor skills, high degree of challenge, and risk. In addition to access and the number of people, along with the associated noise considered above, this characteristic considers the type of use and mode of travel. It is characterized by meeting nature on its own terms, without comfort and convenience facilities (USDA Forest Service 1977). Remoteness was not a wilderness quality factor rated in 1978, but is a factor considered since the mid-1990s in evaluating effects on roadless areas.

The size of the WSA provides for challenge and risk while using outdoor skills with recreation opportunities which include hiking, big and small-game hunting, fishing, and viewing a moderate diversity of vegetation and wildlife. Current use is very light, consisting primarily of big-game hunting, but it also includes day hiking, wildlife viewing, horseback riding, camping, and fishing. Major attractions include

trails and campsites along the several larger streams and meadows. The State Line and Razorback Ridge Trails provide varied alpine scenery near the crests.

Opportunities exist for motorcycle users to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale.

(2009 Wilderness Institute Monitoring): Ninety-three percent of the trails were single-track width. Nineteen non-system trails were identified. Most (68%) were new routes created by recreational use (type of use unclear but one route appeared to be created by an ATV and eight appeared to be created by foot travel {Project File document WSA-011.pdf}.

Diversity

Diversity of vegetation, fish and wildlife, terrain, lakes and streams, and climate improves opportunities for a larger variety of primitive recreation activities (USDA Forest Service 1977). The three-part rating system ranges from LITTLE DIVERSITY to VERY DIVERSE.

The original WARS rating for Diversity was VERY DIVERSE (has much diversity in nearly all the above categories) (USDA Forest Service 1978c).

Diversity of the WSA has not changed since 1977.

Challenge

This component is measured as the number and extent of challenging features such as dangerous animals, climatic disturbance, avalanche potential, terrain features (cliffs, quicksand, sink holes), fast moving water, glaciers, and a lack of dominant visual features on which to orient oneself (USDA Forest Service 1977). The three-part rating system ranges from RARE to MANY.

The original WARS rating for Challenge was FEW (features commonly considered hazardous encountered in area) (USDA Forest Service 1978c).

Challenge in the WSA has not changed since 1977.

Special Features

Special features are those unique geological, biological, ecological, cultural, or scenic features that may be located in the area. Unique fish and wildlife species, unique plants or plant communities, Research Natural Areas, outstanding landscape features such as rock formations, and significant cultural resource sites are some of the items that are considered when analyzing this element.

Significant scenic attractions include two prominent landmarks, meadows in the upper reaches of Blue Joint and Deer Creeks, and wide panoramas viewed from the major divides. The landmarks are Castle Rock, the remnant of a volcanic plug, and a natural rock arch east of the confluence of Jack the Ripper and Blue Joint Creeks. Part of the Southern Nez Perce Indian Trail traverses the ridge between Nez Perce Pass and Bare Cone Lookout in the northern portion of the area. Several archeological sites are associated with the trail.

Manageability/Boundaries

This element relates to the ability of the Forest Service to manage the area to meet size criteria and the six elements discussed above. Changes in the shape of an area influence how it can be managed. The location of other proposed projects outside the area are also factors to be considered. Boundary-management impacts relate to such factors as need to change boundaries to terrain features that can easily be located, and the provision of access to the area. Again, manageability/boundaries was not a wilderness quality factor rated in 1978, but is a factor considered since the mid-1990s in evaluating effects on roadless areas.

RARE II area A1941 comprises the Blue Joint roadless area. The following adjustment in net acres has taken place since the RARE II inventory:

Table 3.3- 6: Adjustment in Net Acres in Blue Joint since RARE II Inventory

	National Forest		Total Acres
Adjustment	**Bitterroot**	**Salmon**	
RARE II inventory	126,500	19,905	146,405
Added to wilderness (P.L. 96-312)	-65,100	-19,415	-85,005
Land added to inventory	0	0	0
Refined acreage calculation	+ 3,970	0	+ 3910
Current inventory	**65,370**	**490**	**65,860**

Approximately 85,000 acres have been designated Wilderness by P.L.96-312, which established the Frank Church-River of No Return Wilderness. Boundary decisions excluded two parcels in Idaho from wilderness designation. These are contiguous with the congressionally designated Blue Joint Wilderness Study Area.

The roadless area is bordered on the west by 17 miles of the Frank Church-River of No Return Wilderness. Boundaries are well defined by topography along 75 percent of the perimeter. The remainder would be difficult to describe and locate on-the-ground since it is midslope, either passing through or lying immediately above roads and development. Roads and timber harvest in Coal Creek and Woods Creek would not be realistic to manage as wilderness. Eliminating these impacts would remove about 4,000 acres from consideration as wilderness, and would place boundaries on recognizable topographic features. Most areas of high mineral potential could not be separated without seriously eroding wilderness characteristics (USDA Forest Service 1987b, Appendix C). The area could be managed as an addition to the Frank Church-River of No Return Wilderness or as a separate wilderness.

The area is entirely National Forest System land. There are no contractual agreements or known statutory rights, and no oil or gas leases.

Wilderness Character Relative to Alternatives.

The discussion in this section will focus on the changes in wilderness character that have occurred since 1977, and how each alternative would either positively or negatively affect wilderness character. Table 3.3- 7, Blue Joint Wilderness Study Area, Status of Roads and Trail in 1977, 2003, and 2013 and Travel Planning Alternatives, summarizes the changes in motorized routes by trail or road from 1977 to 2013:

BLUE JOINT WILDERNESS BLUE JOINT STUDY AREA

TABLE 3.3- 7: STATUS OF ROADS AND TRAILS IN 1977, 2003 & 2013 AND TRAVEL PLANNING ACTION ALTERNATIVES

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2003						CHANGE SINCE 1977	STATUS IN 2013-Existing Condition						CHANGE SINCE 2003	Travel Planning-Alternative 1						Travel Planning-Alternative 3						Travel Planning-Alternative 4					
	Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail	
		ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT		ST	TT		ST	TT		ST	TT	
Trail 183 - Bare Cone		2.9					1976 Travel Plan Map		2.9							2.6					Periphery snowmobile use on 468 on the north, road 1303 to Bare Cone an 5669 on south end				2.6			2.6									2.6	
Trail 627 - Castle Rock		4.2					1976 Travel Plan Map		4.2							4.6					MSWA snowmobile use on Trail 627 to Nez perce Pass.				4.6			*4.6*									4.6	
Trail 614 - Blue Joint		14.8					1976 Travel Plan Map shows road location – Note: 1/16/75 letter R. Strong to Reg. Forester under "Nonconforming Uses or Developments" lists "1/2 mile dozer constructed trail paralleling Blue Joint Creek. This is a part of Trail No. 614. Category – Constructed"		14.8					Reconstruction placed gabions next to stream to prevent erosion and reduce hazard to stock. Trail remained standard width (old road template still exists on the lower ½ mile, but is brushed in and maintained at ATV width –no longer allows passage of full size vehicles).		14.7					Motorcycle and mountain bike use on single track trail has increased somewhat.				14.7			14.7									14.7	
Trail 137 - Jack the Ripper		3.1					1976 Trvel Plan Map		3.1							3.0					Mountain bike use on single track trail has increased somewhat				3.0			3.0									3.0	
Trail 16 - Divide South		17										17		The trail is closed to motorized use by most parts being within the FCRONR wilderness since 1980 legislation (despite 1984 travel map showing the wilderness boundary following the trail instead of the state line).							Trail 16.0 is within the Frank Church River of No Return Wilderness and therefore outside the BNF Travel Planning Project boundary.																	
Trail 223 - Little Blue Joint		3.7					1976 Travel Plan Map		3.7					None		4.3					Mountain bike use on single track trail has increased somewhat		4.3					4.3									4.3	
Trail 106 - Razorback Ridge		13					1076 Travel Plan Map		13					None		12.6					Mountain bike use on single track trail has increased somewhat		12.6					12.6									12.6	
Trail 138 - Chicken Creek		7					1076 Travel Plan Map		7					None		5.7					No evidence of motorized use in 2008 when monitoring was done		5.7					5.7									5.7	
Trail 139 - Deer Creek		13					1076 Travel Plan Map		13					ATV use increased on first two miles of Deer Creek trail		12.5					No evidence of motorized use in 2008 when monitoring was done		12.0			0.5		12.5									12.5	
Trail 602 - Deer Creek Point		2.6					1076 Travel Plan Map		2.6					None		2.8							2.8					2.8									2.8	
Road 74155	0.2						RARE II worksheets 1978 and Coal Ck. TS information.	0.2						None	0.2										0.2			0.2							0.2					
Road 74156	0.5						RARE II worksheets 1978 and Coal Ck. TS information.	0.5						None	0.4										0.4			0.4							0.4					

BLUE JOINT WILDERNESS BLUE JOINT STUDY AREA

TABLE 3.3- 7: STATUS OF ROADS AND TRAILS IN 1977, 2003 & 2013 AND TRAVEL PLANNING ACTION ALTERNATIVES

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2003						CHANGE SINCE 1977	STATUS IN 2013-Existing Condition						CHANGE SINCE 2003	Travel Planning-Alternative 1						Travel Planning-Alternative 3						Travel Planning-Alternative 4						
	Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail	
		ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT		ST	TT		ST	TT		ST	TT	
Road 74157	1.1						RARE II worksheets 1978 and Coal Ck. TS information.	1.1						None	1.1										1.1			1.1						1.1					
Road 74158	0.6						RARE II worksheets 1978 and Coal Ck. TS information.	0.6						None	0.5										0.5			0.5						0.5					
Road 74159	1.2						RARE II worksheets 1978 and Coal Ck. TS information.	1.2						None	1.1										1.1			1.1						1.1					
Road 044	1						1976 Travel Plan Map, 12/9/74 letter R..Strong to Regional Forester., "One half mile dozer trail to small pothole in the headwaters of Blue Joint Creek" 1/16/75 letter R.Strong to Reg. Forester, "1/2 mile dozer constructed trail in headwaters of Blue Joint Creek. Constructed in 1962 for Corn Creek fire. Category – constructed."				1			No closure order, but the road is physically closed by trees and brush growing in roadbed.							The Bitterroot National Forest Road GIS layer no longer contains any reference to this road.																				
Road 1381	3.2						1976 Travel Plan Map – NOTE ONLY A TIP INSIDE ROADLESS BNDRY, BUT EXCLUDED FROM MWSA BNDRY.	3.2						None							The Bitterroot National Forest Road GIS layer shows Road 1381 is totally outside the Blue Joint WSA.																				
TOTAL	**7.8**	**81.3**	**0**	**0**	**0**	**0**		**6.8**	**64.3**	**0**	**1**	**17**	**0**		**3.3**	**62.8**	**0**	**0**	**0**	**0**		**0**	**37.4**	**0**	**3.3**	**25.4**	**0**	**3.3**	**62.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3.3**	**62.8**	**0**
ST = single track trail																																							
TT = Two track trail																																							

Gauging effects to natural integrity and apparent naturalness is relatively straightforward. It is accomplished by measuring the presence and magnitude of human-induced change to an area (physical impacts like roads, fences, etc.). Apparent naturalness is tracked by how the landscape appears to people, even though there may have been some minor human modifications. Travel management planning decisions that may affect these attributes are largely confined to trail disturbances (either through reconstruction or change in use type), and accompanying weed infestations, visual impact from trails, and displacement of or effects to wildlife. Altering the physical engineering of trails (that is converting single-track to double track) would also affect water movement, soil displacement, and vegetation.

A primitive recreation experience includes the opportunity for solitude, a sense of remoteness, closeness to nature, serenity, and spirit of adventure through the application of woodsmen skills in an environment that offers a high degree of challenge and risk. Such opportunities are normally found in Primitive and Semi-Primitive Non-Motorized classes of the Recreation Opportunity Spectrum (ROS). Impacts related to primitive recreation experiences are normally expressed in changes to the physical setting, activities occurring in the area, and changes to the social experiences of users.

Evaluating effects to remoteness (opportunity for primitive recreation), are typically tracked for two parameters: physical and social. The physical parameters of an area that foster a sense of remoteness, including an area's size, distance from roads, visibility of lights, and sounds associated with civilization, would not change with travel management decisions about appropriate uses of trails in any alternative. When evaluating effects to remoteness, the social aspect of how people travel within an area is an effect often discussed. When areas have historically only been accessed by nonmotorized means, and then decisions are made to allow motorized access, more terrain is readily available to a new user group, which may compromise traditional users' sense of solitude, remoteness, challenge, and risk. At the same time, areas that have historically had motorized use, and then decisions are made to no longer allow this type of use, can limit the challenge, risk, and desired experience from an entirely different user group.

Opportunities for solitude were gauged during RARE I and II evaluations using WARS, based primarily on physical features of the area: size, presence of vegetative or topographic screening, and distance from civilization. Travel management decisions would not change these parameters relating to solitude in the WSA in any alternative. However, travel management decisions do have the potential to affect peoples' perception of solitude at the time and place they are experiencing them. The presence, volume, and type of other users, and the sounds and smells have all been identified as affecting the personal subjective sense of solitude. All of these effects are temporary in nature, and do not affect the attributes of an area that create a sense of solitude.

The purpose of this analysis is to disclose the potential effects of motorized recreation on wilderness attributes, and to determine if, or to what extent, it might affect future designation as wilderness under the Wilderness Act of 1964.

The effects analysis is both quantitative and qualitative. That is, the reduction or increase in road and trail miles by alternative provides a quantitative look at project effects. The extent of effects on travel routes and other recreation opportunities is necessarily a qualitative assessment based on past forest visitor patterns, historical trends, and professional judgment based on the experience of the recreation specialists completing this analysis.

Environmental Consequences

The following analysis is based on issues identified for WSAs. The first issue is that motorized/mechanical transport use on roads and trails in WSAs impacts their wilderness attributes. Measurement indicators are the miles of motorized routes and how they affect wilderness attributes.

The second issue involves over-snow vehicle use. Designating areas open to over-snow vehicle use impacts recreation experiences. Measurement indicators are acres of WSAs open to over-snow vehicle use and how they affect wilderness attributes.

Please refer to Table 3.3- 8, below for this discussion.

Table 3.3- 8: Miles of Motorized/Mechanical Transport Routes and Acres Open to Over-Snow Use in the Blue Joint Wilderness Study Area by Alternative

	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Miles Open Roads	0.0	3.3	3.3	0.0
Miles Motorized Trails	37.4	62.8	62.8	0.0
Miles Trails Open to Mechanical Transport	40.0	62.8	62.8	0.0
Acres open to over-snow vehicle use	4,306	61,965	61,965	0.0

Refer to Appendix G of this FEIS, which shows the routes screened for the DEIS. Appendix H shows the changes to routes between the DEIS and the FEIS. Appendix I shows the proposed designations for all routes, including those that were not screened.

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in wilderness study areas (WSAs) impacts their wilderness attributes

Indicator: Miles of motorized routes in the WSAs
Indicator: Effects to wilderness attributes

Effects Common to All Action Alternatives
Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with wilderness attributes. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1
Alternative 1 excludes motorized use on 25.4 miles of existing motorized trails compared with Alternative 2, which does not exclude motorized use on existing motorized trails. Alternative 1 would designate 37.4 miles open to motorized use on trails, compared to 62.8 miles open to motorized use on trails in Alternative 2. It designates 0.0 miles open to motorized use on roads, compared to 3.3 miles open in Alternative 2.

Along the 25.4 miles of routes closed to motorized use, Natural Integrity will improve to the extent that motorized-induced changes to the areas are able to recover. Apparent Naturalness will also improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase since the primary trail to be closed is the Blue Joint Creek Trail #614, which is near the Frank Church-River of No Return Wilderness, which will increase isolation from the evidence of man, and result in a greater feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 37.4 miles of trails and 0 miles of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. The Opportunities for Primitive Recreation Experience will decrease with less isolation from the evidence of man, less feeling of a vastness of scale, and by having

an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 40 miles of routes, which is 22.8 miles less than in **Alternative 2.**

The current management direction that allows motorized wheeled vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 1**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 2

The WSA would retain motorized use on 62.8 miles of existing trails and 3.3 miles of open roads for a total of 66.1 miles. These trails would be open to motorcycles, but would exclude ATVs.

As long as motorized user numbers remain constant there will be little change to existing wilderness attributes. However, as conditions currently exist, the WSA has less **Natural Integrity**, less **Apparent Naturalness**, fewer **Opportunities for Primitive Recreation Experience**, and fewer **Opportunities for Solitude** compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: **Natural Integrity** will decrease to the extent that motorized-induced changes to the area increase. **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Opportunities for Primitive Recreation Experience** will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 62.8 miles of routes.

The current management direction that allows motorized wheeled vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3

Alternative 3 would designate motorized use on 62.8 miles of existing trails and 3.3 miles of existing open roads, which is similar to Alternative 2. There would be a total of 66.1 miles of designated routes open to motorized travel.

In Alternative 3, similar to Alternative 2, as long as motorized user numbers remain constant there will be no change to existing wilderness attributes. However, as conditions currently exist, the WSA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

Along the 62.8 miles of trails and 3.3 miles of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 62.8 miles of routes, which is the same as in Alternative 2.

The current management direction that allows motorized wheeled vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under

Alternative 3. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 62.8 miles of motorized trails, all of which are open to motorized use in **Alternative 2**. **Alternative 4** also excludes motorized use on all miles of road, compared to 3.3 miles of road open to motorized use in **Alternative 2**. Thus, there will be a total of 0 miles of designated routes open to motorized travel in **Alternative 4**.

Along the 62.8 miles of routes closed to motorized use: **Natural integrity** will improve to the extent that motorized-induced changes to the area are able to recover. **Apparent naturalness** will improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for primitive recreation experience** will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. **Opportunities for solitude** will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would not be allowed on any trails or roads, which is 62.8 miles less than in **Alternative 2.**

There would be no motorized wheeled vehicle access for dispersed camping in Blue Joint WSA in **Alternative 4** on the Forest.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of WSAs open to over-snow use and effects to wilderness attributes

Effects Common to Alternatives 1, 2, and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Wilderness attributes would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on wilderness attributes are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Alternative 1
4,306 acres of the Blue Joint WSA would be open to over-snow vehicle use in **Alternative 1**, which is 57,659 acres less than in **Alternative 2**. These acres are those within the recommended wilderness portion of the Blue Joint WSA that would now be closed under **Alternatives 1 and 4**.

Alternative 2
61,965 acres of the Blue Joint WSA are would be open to over-snow vehicles in **Alternative 2**.

Alternative 3
61,965 acres of the Blue Joint WSA would be open to over-snow vehicle use in **Alternative 3,** which is the same as **Alternative 2**, since the acres within the portion of the Blue Joint WSA that are also in recommended wilderness would now be open to over-snow vehicles

Alternative 4
When compared to the 61,965 acres open to over-snow vehicle use in **Alternative 2,** 0 acres of the Blue Joint WSA would be open in **Alternative 4**. This would close popular over-snow vehicle terrain, and would substantially change the primitive recreation and solitude available to nonmotorized users, as well as diminishing the recreational opportunity/experience for the motorized user. These new nonmotorized acres would result in beneficial affects to wilderness attributes of natural integrity, relating to reduction in stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and increased opportunities for solitude and a sense of remoteness. Changes of encountering others while recreating are less which enhances those opportunities for solitude.

Summary

Summer

Alternative 4 would have largest reduction of miles of routes designated for motorized use (66.1), followed by **Alternative 1** (28.7). There would be no change with **Alternatives 2** and **3**. Closing motorized routes in WSAs is proposed to preserve their wilderness attributes.

Alternatives 2 and **3** would have the greatest number of miles of motorized routes, 66.1, followed by **Alternative 1** (37.4). **Alternative 4** would have no miles.

Alternative 4 would have the most beneficial impact wilderness attributes, followed by **Alternative 1**, while **Alternatives 2** and **3** would have equal adverse effects. Under **Alternative 4**, all attributes would improve or increase along the 66.1 miles of routes closed to motorized use. **Alternative 1** would show a 40 percent decrease in the miles of motorized trails. The wilderness attributes would improve or increase along the roads and trails closed to motorized use, but would decline or decrease along the routes remaining open to motorized use.

Alternatives 2 and **3** would not close any roads or trails to motorized use. Consequently, their wilderness attributes would decline or decrease.

Over-Snow

Alternative 4 would show the largest reduction in acres open for over-snow vehicle use (61,965), followed by **Alternative 1** (57,659). There would be no change for **Alternatives 2** and **3**.

Alternative 4 would have no acres open to over-snow vehicle use. Consequently, the wilderness attributes would improve or increase.

Alternative 1 would show a 93 percent decrease in the acres available for over-snow vehicle use.

There would be no change with **Alternative 2**, or **Alternative 3**, which is the same as **Alternative 2**. This would adversely impact wilderness attributes of natural integrity, as well as opportunities for solitude and sense of remoteness.

Sapphire Wilderness Study Area

Introduction

The Montana Wilderness Study Act of 1977 (MWSA) (PL 95-150) required the study of certain lands to determine their suitability for designation as wilderness in accordance with the Wilderness Act of 1964. These lands are referred to as Wilderness Study Areas (WSA). One of the nine areas identified in the MWSA was the 115,699 acre "Sapphire Wilderness Study Area" located on the Bitterroot Forest (43,515 acres) and the Deerlodge Forest (now the Beaverhead-Deerlodge Forest) (72,185 acres). For the study, the Sapphire WSA was grouped with the Blue Joint (Bitterroot National Forest) Wilderness Study Area. After study, analysis, and evaluation of public comments, the Blue Joint and Sapphire Study Report and Draft Environmental Impact Statement was completed in 1985 (USDA Forest Service 1985). This report was the administrative recommendation to Congress for the land allocation and management of the area. The report recommended that all 117,030 acres of the Sapphire Wilderness Study Area be managed as nonwilderness. Congress has not yet acted on the recommendations contained in the report.

Language in the 1977 Act required that the areas be managed to maintain their presently existing wilderness character and potential for inclusion in the National Wilderness Preservation System. In 1996 the Montana Wilderness Association filed an eleven count complaint that this part of the Act had been violated. Four counts were carried forward to decision, the others being dismissed or considered superfluous. One of the four counts pertained only to the Hyalite-Porcupine-Buffalo Horn WSA on the Gallatin Forest; another of the four counts only pertained to the West Pioneer WSA on the Beaverhead-Deerlodge National Forest. On May 20, 2001, U. S. District Court Chief Judge Molloy made a ruling that ordered one count dismissed and had orders for the remaining count.

Count I (the remaining count) alleged that the actions and inactions of the Forest Service resulted in substantially increased motorized use of the WSAs, which resulted in increased environmental damage, all in derogation of their potential for wilderness designation and Congress' management mandate.

Judge Molloy enjoined the Forest Service from taking any action that would diminish the wilderness character of a WSA as it existed in 1977, or that diminished the area's potential for inclusion in the National Wilderness Preservation System. He further ordered that the Forest Service should take reasonable steps to restore the wilderness character as it existed in 1977 if the areas' wilderness character or its potential for inclusion in the National Wilderness Preservation System has been diminished since 1977. To determine if any changes had occurred, the Forest Service decided to make an assessment by comparing the conditions that existed in 1977 and the present time.

In March of 2007, the Forest Service, the Montana Wilderness Association, West Fork Property Owners, Blue Ribbon Coalition, and other entities entered into a settlement agreement regarding the 1996 complaint. All parties agreed that the new travel management plans would address management of the WSAs. The agreement states that the travel management decisions shall address summer and winter use of trail and off-trail areas within each WSA, based upon applicable law and policy including policy currently set forth in FSM Section 2329; and that pending completion of the travel management plans for the WSAs, the Forest Service shall manage the WSAs in accordance with applicable law and policy, including but not limited to, the Montana Wilderness Study Act PL 95-150;91 Stat 1243 (1977) and FSM Section 2329 {Project File folder 'public_involvement_pre-nepa_2005-09-2007,' Project File document PUBLIC-064.pdf}.

In September 2008, a Region 1 supplement to the Forest Service Manual was published which provided clarification of the management of wilderness study areas {Project File document WSA-013.pdf}. Forest Service Manual id2300-2008-1, Section 2329 (Management of Wilderness Study Areas) states:

1. Manage Montana Wilderness Study Areas (MWSA) to maintain wilderness character as it existed at time of designation (1977) and potential for inclusion of the area in the National Wilderness Preservation System (NWPS).

a. when making project level decisions (for example, trail maintenance, relocation, improvement, construction and reconstruction…the line officer must consider the effect of the decision on the wilderness character as it existed in 1977 (See 2329 Exhibit 1 for definition of wilderness characteristics).

b. If wilderness characteristics have been degraded; restore the area to 1977 conditions. That is, if a trail was single track and has evolved into two-track, close the trail to two-track use and restore to single track use, or allow natural restoration where effective. If conflicting uses are occurring, consider separating the users geographically through an appropriate planning process. That is, identify areas for snowmobiling and areas for cross-county skiing and snowmobiling.

c. Trails should not be upgraded to a more-developed standard than existed in 1977.

d. Pursuant to 36 CFR 212.52(2), the line officer shall institute closure of a trail in a Wilderness Study Area if use is causing or will cause considerable adverse effects on resource values referred to in Sec. 212.52(2), until the effects are mitigated or eliminated.

When discussing management of existing uses it says at the time of designation of the areas, uses that existed in 1977 can be allowed to continue subject to 36 CFR 212.57. If increases in amount of use occur, the line officer should consider how the increases affect wilderness character and the area's potential for inclusion in the NWPS. If negative effects are noted, implement actions as described in 1.b. of this policy.

Within the discussion of new uses or activities, the R1 Supplement states, "c. All-terrain vehicles (ATVs) and motor bikes may be allowed on roads that had jeep use in 1977 (two tracks); d. Mountain bikes may be allowed on trails that had established motor-bike use in 1977, or on non-motorized trails as long as the aggregate amount of mountain bike and motorcycle use maintains the wilderness character of the WSA as it existed in 1977 and the area's potential for inclusion in the National Wilderness Preservation System" {Project File document WSA-013.pdf}.

The Supplement further instructs "Forests and grasslands shall monitor WSAs to ensure that the wilderness character is not diminished beyond what existed in 1977 and to ensure that the areas are maintained for the potential inclusion in the NWPS. Monitoring WSAs will be covered through the encompassing monitoring program for the Land and Resource Management Plan (LRMP)" {Project File document WSA-013.pdf}.

The wilderness character of the Sapphire WSA has been assessed and described many times over the last thirty-six years. These studies include the RARE I study in the early 1970s, RARE II in 1979 and the Report and Draft Environmental Impact Statement, Blue Joint and Sapphire Montana Wilderness Study Act Areas in 1985, and the Bitterroot National Forest Plan in 1987. In 2006, the Beaverhead-Deerlodge and Bitterroot National Forests completed this assessment to help determine the current wilderness character of the area and to aid in identifying any restorative measures that may be appropriate or necessary to further the intent of the Montana Wilderness Study Act of 1977, Sapphire Wilderness Study Area Wilderness Character Assessment, May of 2006 {Project File document WSA-010.pdf}. This assessment was expanded for the Bitterroot National Forest portion of the WSA within the analysis area upon combining the conditions in 2006 to the current existing condition and is included as part of this analysis.

1977 Wilderness Character

Establishing the "wilderness character" of the 37,806 acre WSA as it existed in 1977 is no small task. Both sides of the issue, wilderness advocates and motorized use advocates, have their own opinions and recollections as to the conditions in the area in 1977. To help establish some meaningful comparison of conditions in 1977 and in 2012, a number of old records were researched to establish a basis for analysis. Much of the information applies to both the 37,806-acre WSA and the adjoining 5,708 acres of inventoried roadless area. An additional 72,185-acre WSA is located on the Beaverhead-Deerlodge National Forest.

In 1972 the Forest Service embarked on a nationwide evaluation of roadless areas within the National Forest System to identify and recommend suitable areas for wilderness designation. This first effort was called the Roadless Area Review and Evaluation process, and later became known as RARE I. The objective of RARE I was to select roadless areas for further study as potential candidates for Wilderness. The RARE process utilized the Wilderness Attribute Rating System (WARS) to assess wilderness characteristics and utilized four distinct factors identified in the 1964 Wilderness Act – ***natural integrity, apparent naturalness, opportunity for solitude and opportunity for a primitive recreation experience***. A numerical rating from one to seven was assigned. On January 9, 1978 a wilderness quality index for the Sapphire IRA was determined; it received a WARS rating of 24 out of a possible score of 28 (USDA Forest Service 1978b), {Project File folder 'material_referenced,' Project File document REFERENCE-001.pdf}.

Between 1985 and 1987 the Bitterroot National Forest prepared the Report and Draft Environmental Impact Statement, Blue Joint and Sapphire Montana Wilderness Study Act Areas in 1985, and the Bitterroot National Forest Plan (1987) in response to Congressional direction to evaluate the areas for their wilderness potential. This analysis included lands identified in the statute as the Sapphire WSA, as well as other inventoried roadless lands adjoining the WSA. The Bitterroot National Forest Plan FEIS did not recommend any acres in the Sapphire IRA for wilderness under the Forest Plan.

In May 2006, the Sapphire Wilderness Study Area Wilderness Character Assessment was completed to help gather what information was available regarding the 1977 wilderness character of the Sapphire WSA. This assessment was expanded upon combing the conditions in 2006 to the current existing condition, and is included as part of this analysis {Project File document WSA-010.pdf}.

Additional information on roads and trails, and how visitors choose to recreate in the Sapphire area, was found in the Bitterroot National Forest Plan FEIS, Appendix D-Response to Comments (USDA Forest Service 1987b). Also, the Forest Plan FEIS, Appendix K-10, Forest Travel Plan – November, 1976 and Forest Plan FEIS, Appendix 1-Public Involvement Summary {Project File document REFERENCE-001.pdf}; and "Results of Research on Volume of Use for Sapphire and Blue Joint Wilderness Study Areas{Project File document WSA-023.pdf}.

Various monitoring efforts have been ongoing in the Sapphire WSA throughout the years, and information from those studies helped contribute to the expansion of the assessment on wilderness character that follows. These include; "A Report on the Sapphire Area" by Medora Bass, School of Forestry, University of Montana {Project File document WSA-007.pdf }. In 2007, Sapphire Wilderness Study Area, by Jerry Nichols {Project File document WSA-028.pdf}. In 2008, the Bitterroot Quiet Use Coalition Monitoring Report {Project File document WSA-023.pdf}. Also in 2009, the Bitterroot National Forest coordinated with the Wilderness Institute at the University of Montana to do some wilderness character monitoring in the Sapphire Wilderness Study Area {Project File document WSA-012.pdf}. In addition, in April 2012, an analysis of regional and national recreation –use data was conducted to determine the historic volume of use in the Sapphire area at the time it was established in 1977. This is documented in a study titled "Estimating motorized and mechanized use change in the Sapphire Wilderness Study Area from 1977 to 2009, an aid for evaluating change in Wilderness Characteristics"{Project File document WSA-004.pdf }, and workbook/spreadsheets supporting the Sapphire Wilderness Study Area Assessment {Project File document WSA-006.pdf }. The information from these reports helped provide a clearer understanding of the existing condition prior to 1977 when the area was established as a WSA, and also assessed any changes that have occurred since that time.

Other useful information came from old maps and files. In the 1960s and early 1970s, the Forest Service used "Timber Type maps" as the basis for mapping roads, trails, and other features. Starting in 1970, USGS topographic maps became more common as the basic map for showing roads, trails, and other features.

Sapphire WSA: Description and Affected Environment

This inventoried roadless area is identified by number 01421, the same as in RARE II. Roadless area acreage is shown in the following table:

Table 3.3- 9: Roadless Area Acreage for Sapphire WSA

National Forest	Gross Acres	Net Acres
Bitterroot	44,416	44,116
Beaverhead- Deerlodge	72,614	72,414
Total	117,030	116,530

(Acres displayed in this table are from the 1987 Forest Plan, FEIS, Volume II, and will differ slightly from GIS analyses which is used throughout the FEIS).

The Montana Wilderness Study Area is slightly smaller than this net acreage (see Figure 3.3- 2).

The Sapphire WSA is located about 25 air miles southeast of Hamilton and southwest of Philipsburg in Ravalli and Granite Counties, Montana. The WSA can be accessed from State Highways 38 or 472, and from forest roads in Rock, Copper, Moose, Martin, and Skalkaho Creeks. A network of trails and several roads provide access within the WSA.

The area has a north-south orientation of about 25 miles with width, varying from 2 to 10 miles. Road corridors in Copper Creek and the West Fork of Rock Creek extend toward the crest of the Sapphires. These intrusions reduce the width of both the northern and southern portions. Practically the entire boundary is mid-slope, lying above existing roads, timber harvest, or mineral development.

Glacial scouring has produced steep, rocky cirque basins and trough walls along the crest and southern boundary. Remaining lands, primarily in the West and Ross Forks of Rock Creek, are rolling hills with flat creek bottoms. Moraine and glacial deposits reworked by flowing water characterize most valleys east of the crest. Elevations range from 5,000 feet at some points along the lower boundary to 9,000 feet at Kent Peak. Sixty percent of the area is above 7,000 feet.

Prominent landmarks include Bare Hill, Kent, and Congdon Peaks, and Signal Rock. Drainages flowing to the east are Copper Creek, and the Ross and West Forks of Rock Creek, a nationally recognized “blue ribbon” trout fishery. Moose, Martin, and Skalkaho Creeks flow to the west and are tributaries of the Bitterroot River. Fifteen small lakes and numerous potholes occur along the crest. Geology is primarily granite intrusions. Landforms have been modified by past alpine glaciation with soils derived from the parent geology.

Streamside meadows break the forested landscape at lower elevations; exposed bedrock and rubble predominate along the Sapphire Crest, Whetstone Ridge, and the southern portion bordering the Anaconda-Pintler Wilderness. Douglas-fir and lodgepole pine are the primary tree species, with whitebark pine and subalpine larch at the highest elevations. Bunchgrass with scattered Douglas-fir occupies severe south to west-facing sites. Douglas-fir is common on north exposures at lower elevations, and lodgepole pine is common elsewhere. Ground cover is mainly snowberry, ninebark, and beargrass on drier sites, willow and redosier dogwood on cool moist sites, and grouse whortleberry or wood rush on severe cold sites at higher elevations (USDA Forest Service 1985).

The WSA has been managed under the direction of the Moose Creek (USDA, 1973), Skalkaho Gird, and Sleeping Child Unit Plans (USDA, 1974), the Upper Rock Creek Land Management Plan (USDA, 1978a) and subsequently the Deerlodge Forest Plan (USDA, 1987b) and the Bitterroot National Forest Plan.

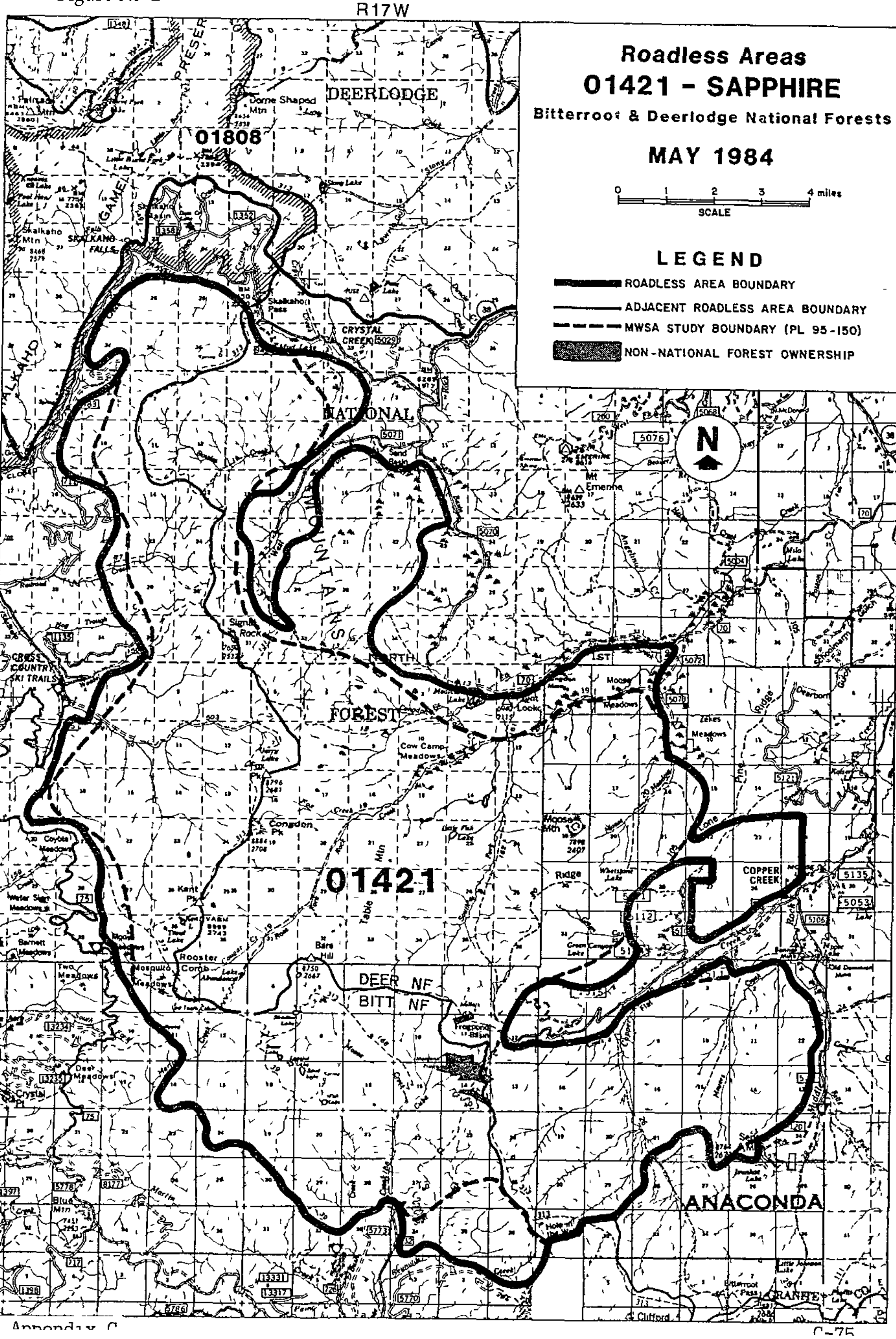
The 1987 Forest Plan for the Bitterroot National Forest identified seven management areas (MA) within this study area. Over seventy-five percent of the area was recommended as wilderness, allocated for semi-primitive recreation, or otherwise designated as unsuitable for timber harvest (MA 6, 5, 8a respectively).

Management Area 5 states in 111-37, (1) manage for recreation activities associated with roadless areas, including hiking, hunting, fishing, camping, motor-biking and snowmobiling. It goes on to say in (2), the travel plan will identify the areas, trails and roads open for motorized vehicle use and the types of vehicles that are permitted. Motorized use will not be permitted where wildlife, adjacent wilderness, soil and water resources or public safety are threatened.

Management Area 6 states in III-41, 3.a. Recreation (1) Maintain existing primitive and semi primitive settings (1987). Manage the area essentially free from evidence of human restrictions and controls; (3) Continue current uses which do not detract from wilderness values. Transitory uses such as chainsaws, trailbikes and snowmobiles are appropriate if permitted by the Forests Travel Plan.

Management Area 8a states in III-58, 3.a. Recreation (1) Manage for ROS setting and recreation activities associated with adjacent management areas; (2) Maintain trails and roads that pass through these units for recreation use unless closure is required to meet other resource standards; (3) Pending resolution by Congress, that portion of the management area within the boundary of the Montana Wilderness Study Act areas will be administered according to the goals and standards established for MA 6.

Figure 3.3-2


R17W
T4N
Roadless Areas
01421 - SAPPHIRE
Bitterroot & Deerlodge National Forests
MAY 1984
0 1 2 3 4 miles
SCALE
LEGEND
ROADLESS AREA BOUNDARY
ADJACENT ROADLESS AREA BOUNDARY
MWSA STUDY BOUNDARY (PL 95-150)
NON-NATIONAL FOREST OWNERSHIP
N
DEERLODGE
NATIONAL
FOREST
01808
01421
COPPER CREEK
ANACONDA
DEER NF
BITT NF
Dome Shaped Mtn
Skalkaho Mtn
SKALKAHO FALLS
Skalkaho Pass
CRYSTAL CREEK
Signal Rock
Mt Emerine
Cow Camp Meadows
Congdon Pk
Kent Pk
Rooster Comb
Bare Hill
Moose Mtn
Table Mtn
CROSS COUNTRY SKI TRAILS
Coyote Meadows
Two Meadows
Deer Meadows
Crystal Pt
Blue Mtn
Moose Meadows
Zekes Meadows
Clifford

Assessment of Wilderness Characteristics

In his order, Judge Molloy mentions that the Wilderness Attribute Rating System (WARS) provides a benchmark for prospective management and specific criteria to guide the agency's exercise of its discretion.

WARS was developed in 1977 by the Forest Service to identify and evaluate wilderness character and was used in early 1978 to evaluate all 1,920 inventoried roadless areas in the Nation. WARS was applied to the Sapphire WSA during January 1978. Using WARS, the Blue Joint and Sapphire Study Report and Draft Environmental Impact Statement, and other information helps establish a 1977 benchmark. These references are also helpful to measure the amount of change from 1977.

WARS is based on four attributes derived from language in the 1964 Wilderness Act: *natural integrity, apparent naturalness, outstanding opportunities for solitude*, and *outstanding opportunities for primitive recreation.* In addition, the system provides for rating four supplemental attributes*: outstanding ecological, geological, scenic, and historic features.* These last four do not pertain to wilderness character and will not be used in this assessment.

In WARS, *natural integrity* and *apparent naturalness* are closely related and use the same rating components. These components include physical developments, mineral developments, recreation, grazing, wildlife management, vegetative manipulation, insect and disease control, non-indigenous plants and animals, fire history, air pollution effects, water pollution, unimproved roads, and occupancies. Ratings are based on the effect of an impact, the percent of area impacted, and the duration of the impact.

Likewise in WARS, *opportunities for solitude and primitive recreation* are closely related and use some of the same components. Mutual components used are size of the area, presence of topographic screening, vegetative screening, and distance from the perimeter to the core. Additional rating components for *opportunities for primitive recreation* are diversity of opportunity, challenge (hazardous things like dangerous animals and cliffs), and absence of man-made facilities (USDA Forest Service 1977).

A review of the rating components of WARS and other information was used to assess change from 1977 and 2012. From this, a comparison was made how physical features and type of use has changed over time.

Natural Integrity and Apparent Naturalness

Natural integrity is looking at the degree to which the area retains its primeval natural integrity in a pure ecological sense. It is the extent to which long-term ecological processes are intact and functioning. Impacts to natural integrity include physical developments (roads, utility rights-of-way, fences, lookouts, and cabins), recreation developments, domestic livestock grazing, mineral developments, wildlife/fisheries activities, vegetative manipulation, and fire suppression activities.

Apparent naturalness is whether the area appears natural to most people. It considers if the environment looks natural to most people using the area. The area generally needs to appear to have been affected primarily by the forces of nature, even though some of the long-term ecological processes of an area may have been interrupted, the landscape of the area appears to be affected by the forces of nature. If the landscape has been modified by human activity, the evidence is not obvious to the casual observer, or is disappearing due to natural processes.

Another way of putting it is that natural integrity estimates the magnitude of an impact while apparent naturalness focuses in the importance of those impacts to most visitors (USDA Forest Service 1977).

Attributes considered in this assessment of natural integrity and apparent naturalness include physical developments, mineral exploration, types of access, effects of other management activities, changes in vegetation, and land occupancy. Changes in these attributes since 1977 and their effects on the wilderness character are described in the following sections.

Physical Developments
Most physical developments within the Sapphire WSA since 1977 are related to travel routes and fences.

Total travel routes (roads, single-track trails, and two-track trails) have decreased an estimated 35.1 miles since 1977 (See Table 3.3-11).

Roads
Since 1977, Frogpond Road #80 (0.5 mile within the WSA), and Miller Mine Road #8671 (0.6 mile) have had spot surfacing and drainage work. One mile of the Whetstone Ridge Road through wet meadows, from its junction with Frogpond Road #80 to the junction of South Fork Trail #162 and Whetstone Ridge Trail #20, has been replaced by a trail on a different location to avoid wet areas, and the road was closed. The trail is closed to motorized wheeled vehicles. The Whetstone Ridge Road is now closed and is revegetating naturally.

Several roads access the WSA, including those at Frogpond Basin; along Congdon Creek, Moose Meadows Creek, Lone Pine Ridge, Skalkaho Creek; and old firelines in Martin and Moose Creeks. Both Trout and Kent Lake dams are breached, although application has been made for reconstruction.

Firelines and primitive roads built during the Sleeping Child Fire of 1961 are evident in the Martin Creek area. Those firelines that were built by clearing vegetation are healing rapidly, while dozer cuts on sideslopes have permanently altered the landscape. There are approximately 9 miles of dozer line ranging in width from 15 to 100 feet.

Trails
In 1977, there were approximately 47.1 miles of single-track and 19.7 miles of two-track trails within the WSA. In 2005, there was an estimated 43.1 miles of single-track and 20.23 miles of two-track trails. There are now approximately 25.7 miles less of single-track trail than in 1977. The Forest Service constructed about one mile of new single-track trail but also obliterated another 0.4 mile single-track. Users have established a poorly defined trail around Rooster Comb for about 0.5 miles new single track. The remaining reduction is due to widening of about 1.7 miles of single-track trail into two-track tread since 1977, primarily through ATV use.

Currently in the WSA there are 10.3 miles of two-track trail, which is a reduction of 9.4 miles since 1977. The Forest Service converted about 1.3 miles of road into two-track trail, constructed another 2.8 miles of new two-track trail, and obliterated 0.4 miles of two-track trail. An estimated 3.8 miles, primarily old firelines and access routes constructed during the 1961 Sleeping Child Fire, appear to have brushed-in sufficiently to restrict or prohibit use. About 1.7 miles of two-track trail had previously been single-track trail, as noted above. The remaining 2.3 mile increase is the result of two user-created routes, 2.25 miles of which is one new trail apparently established in 2003. Use of this new route is legally prohibited, and has been signed as closed. These trail changes are described in more detail below and in Table 3.3-11.

The Bitterroot/Rock Creek Divide Trail #313 traverses the length of the Sapphire Crest within the WSA from Skalkaho Pass to the Anaconda Pintler Wilderness boundary, meandering through the Bitterroot and Beaverhead-Deerlodge National Forests on both sides (of the divide. The portion of the trail from Frogpond Basin north to the Ross Fork saddle on the ridge above Lake Abundance follows an old fireline constructed for the Sleeping Child fire in 1961 (approximately 8 miles) (USDA Forest Service 1961) {Project File document WSA-001.pdf} Approximately five miles of this “two-track” trail was reconstructed in 1995 to reduce erosion and safety problems (junction trail #39 south to Frogpond Basin).

The trail south of Rooster Comb is hard to find. A user trail drops into the basin to the east. Some limited ATV encroachment west of Abundance Saddle; closure in 2005 to motorized use, Abundance Saddle to Trail #39, to protect cultural sites.

Chain of Lakes Trail #39, also an “access road” constructed during the Sleeping Child fire, received heavy reconstruction along with the Bitterroot Rock Creek Trail #313. As with Trail #313, the work on Trail #39

was designed to reduce erosion problems, including some extremely excessive grades and wide running surfaces. Currently, the trail is very popular and is deeply rutted in sections due to use and steepness of trail.

A 2.25 mile single-track trail was constructed from trail #313 to Kent Lake in 1991 or 1992. While motorized use has not been legally restricted, trail monitoring indicates only light overall use and little or no ATV use at this time.

In 1993, two separate, steep, single-track motorized trails to Fish Lake and Faith Lake were obliterated and rerouted with a single, nonmotorized route for the first mile, and then continued with separate new lower gradient, nonmotorized routes to each lake (Trails #420 and #421).

In 1995, erosion control drainage was added to a 0.1 mile user-developed two-track route, from Trail #39 to an overlook above Charity Lake basin, and the route (#332) was added to the Forest's trail system for continued monitoring and maintenance.

The other trail that has been constructed since 1977 is a 2.7 mile portion of Bitterroot/Rock Creek Divide Trail #313. The new trail starts on Frogpond Road #80, goes past the O'Brian Mine, and connects with the existing Bitterroot/Rock Creek Divide Trail #313 on the top of the divide. This trail was constructed to replace the jeep road portion that was used to follow through the Montana Prince Mine private land. There is no public access right-of-way through the private land. This new trail is two-track and open to ATV use.

Similarly, a 0.4 mile portion of Mosquito Meadows Trail #102 within the WSA has widened into a two-track trail tread through ATV use since 1977. There are reports of annual but intermittent use by ATVs beyond this point, but recent field monitoring showed little evidence of trail widening or new trail establishment beyond this point.

A new, unauthorized user-created two-track ATV route was discovered in 2003 running cross-country along ridge tops north from the Skalkaho-Sleeping Child Divide Trail #87 for approximately 2.25 miles. Use of this route is legally prohibited based on the 2001 prohibitions on motorized wheeled cross-country travel. This two-track was signed closed to motorized use in 2005, and continued monitoring is planned.

No evidence of mountain bike use in 1977 could be found, but currently it is becoming popular along the Bitterroot/Rock Creek Divide Trail #313, Chain of Lakes Trail #39, Railroad Creek #77, Weasel Creek #156, Jerry Lake Trail #503, and Sign Creek Trail #40.

Fence

In 1977, there was less than one mile of fence within the WSA. Since 1977 less than one quarter mile of new fence associated with the livestock grazing allotments has been constructed in the WSA. No livestock water developments are within the WSA.

Mineral Developments

Old mining prospects and development are found on 250 acres of patented lands. Since 1977, additional mining exploration work has taken place at the Meyers Mine. The road leading to the mine was improved for the exploration work. When the exploration work ended, the road had drainage work done and the upper 2.5 miles were closed to all motorized vehicles. Four new mining claims have been established in the WSA since 1977. Mining operations continue at Frogpond Basin on the Sapphire Crest, and just outside the southern boundary near Senate Mountain.

Recreation

By 1977, both summer and winter recreational use of the Sapphire area was well established. This included both motorized and nonmotorized activities.

In 1977, most of the 117,030 acre Sapphire WSA was open to yearlong unrestricted motorized use on roads and trails, as well as cross-country travel. The only restriction was on the use of full sized wheeled vehicles (cars and trucks) in the area between Martin Creek, Sign Creek, and the Sapphire divide (USDA Forest

Service 1976; Bitterroot Forest Travel Plan Map 1977). The remainder of the WSA was legally open to all types of motorized use.

In 1977, motorized vehicle use consisted mostly of full sized vehicles, motorcycles, and snowmobiles. With the advent of three and four wheel ATVs in the 1970s, use of these vehicles became popular; by 1977, ATVs may have begun to use the WSA.

From 1977 to the present time, the Forest Service has increasingly restricted wheeled motorized vehicle use in the WSA. Today, all motorized wheeled cross-country travel is prohibited. Use of full-sized cars and trucks is prohibited entirely except on 0.6 miles of road. Overall, over one half of all travel routes within the WSA are now closed to ATV use, when none were closed in 1977. There is now no motorized wheeled cross-country travel allowed (USDI and USDA Forest Service 2001a).

In 1977, snowmobile use in the WSA was unrestricted. Most use was in the Frogpond Basin area, on a marked trail to the O'Brien Mine, on several other unmarked trails, and in the Sleeping Child, Martin, and Moose Creek areas {Project file documents WSA-007 and WSA-008.pdf}. Though no data exists on how much snowmobiling use was occurring in 1977, it can be assumed there was less than there is now. Presently, snowmobiling is still a popular winter recreation activity in the Frogpond Basin area of the WSA, and on the Bitterroot/Rock Creek Divide Trail #313 to Shadow Lake and beyond. There is no longer a marked snowmobile trail to the O'Brian Mine. There never has been any Forest Service authorized grooming of snowmobile trails in the WSA. Since 1977, some snowmobile restrictions have been implemented, mostly seasonal. Snowmobiling is now restricted during the fall hunting season, October 15 to December 1, in the area north of Fox Peak-Cow Camp Meadows, and on the Ross Fork, South Fork, and Whetstone Ridge Trails. Other than these restrictions the WSA continues to be open to snowmobile use.

There is typically no ground disturbance associated with snowmobiling. While the amount of snowmobile use in the WSA has increased since 1977, the areas being used by snowmobiles in 1977 and at present remain essentially the same. To a large degree snowmobile riding in the WSA involves playing in the meadows in the Frogpond Basin and Mosquito Meadows to Martin Creek areas, trail riding on the old firelines, and high marking on open slopes. This use was also occurring to some extent in 1977.

Grazing, Watershed, and Wildlife Management

There is evidence of past heavy, domestic sheep use on the Crest, although the area has mostly recovered and the disturbance would not be evident to most visitors. Cattle do drift from Frogpond Basin and from lower elevation lands outside the area.

Since 1977, watershed projects have focused on roads and trails located on primitive access roads and firelines. Mud holes on the road to the Miller Mine (private land) in the Frogpond Basin area were filled in with rock and native material and drainage installed (culverts). Extensive drainage, trail relocation, and spot narrowing was done on Chain of Lakes Trail #39, and part of the Bitterroot/Rock Creek Divide Trail #313 to mitigate chronic erosion and safety problems in 1995.

There have been no wildlife or fisheries improvement projects undertaken in the WSA.

Both dams at Kent and Trout Lake have been breached, although application has been made for reconstruction.

Vegetative

In 1996 the 1,399 acre Sapphire Divide Research Natural Area was established within the WSA. The natural area was set aside to preserve a representative sample of an ecological community primarily for scientific and education purposes.

There have been no timber sales on National Forest System lands in the WSA. Since 1977, timber harvest has occurred on private land within the WSA (Montana Prince Mine).

There have been no prescribed fires in the WSA.

Bark beetle mortality has increased recently, primarily in the Moose Creek and Skalkaho Creek portions of the WSA. Douglas-fir bark beetle is active in the lower elevations, and the western balsam bark beetle is currently active in the upper elevations of Moose Creek.

White pine blister rust, an exotic pathogen, continues to cause increased mortality in white bark pine.

Noxious weeds

There are relatively few noxious weeds in the WSA. Spotted knapweed has been increasing in extent and density along trails on the Bitterroot portion, although native species remain dominant.

(2009 Wilderness Institute Monitoring): 114 weed patches were recorded. The primary disturbances associated with mapped weed patches were roads (58%) and trails (34%), which is partly a reflection of sampling bias. Nonetheless, the data clearly show that weeds commonly occur in close proximity to trails and roads, and that these serve as important vectors for overall weed dissemination (p.10) {Project File document WSA-012.pdf}.

Wildfire

Between 1977 and 2013, 20,946 acres (approximately 55 percent) of the WSA has burned. Almost all of these burned acres were a result of the fires of 2000 and 2005. In 2000 large wildfires burned over much of the upper portion of the Ross Fork and Skalkaho Creeks, as well as portions of Daly, Bowles, Martin, and Moose Creek drainages. In 2005 another fire burned the headwaters of West Fork Rock Creek and Railroad Creek north and south of Signal Rock. In some areas the fires were very intense, burning all the vegetation. In others the fires were patchy, leaving a mosaic of burned and green vegetation. There is evidence of old helispots on some of the ridges. Policy is now in place to allow fire to play a more natural role in this portion of the MWSA. Additionally, all fire suppression strategies now consider the use of Minimum Impact Management Tactics, reducing the overall impacts of actual fire suppression tactics from what would likely have occurred in fighting fires in earlier years.

Occupancy

There are approximately 450 acres of private land within the WSA. These include the Miller Mine, the Montana Prince Mine, the Lutz Mine (Gold Leaf), and a portion of a homestead in lower Moose Meadows. In 1977 there was one cabin located on private land at the Miller Mine. By 2003, one additional cabin had been constructed on the Miller Mine private land. There are several cabins located on the Montana Price private land. Since 1977, two occupancy trespass cabins on National Forest System land in Frogpond Basin have been acquired by the Forest Service.

In 1977 there were three hunting outfitters, with base camps, operating during the fall hunting season. Since 1977, outfitter use has decreased; currently there are no outfitters operating within the WSA.

(2009 Wilderness Institute Monitoring): Evidence of developments in 2009 include: 37 bridges, 12 cairns, 7 cabins, 4 fences, 3 latrines, 1 dam, 1 water bar, 1 corral, and 44 campsites. Installations and developments were distributed throughout the entire WSA (p.28, 33, 53) {Project File document WSA-012. pdf}.

Outstanding Opportunities for Solitude

Solitude is defined as being isolated from the sights, sounds, and presence of others and from the development and evidence of man. WARS focuses on those intrinsic features of roadless areas that offer users *outstanding opportunities for solitude*–size of the area, presence of topographic screening, vegetative screening, distance from the perimeter to the core, and the degree of permanent off-site intrusions perceived from the area. Noise and human density, though important to solitude, can be changed by management decisions, and are therefore not included in the WARS rating (e.g. by future closing or opening of trails or campsites, controlling uses, etc.) (USDA Forest Service 1977).

Size of Area
Size of the WSA in combination with other criteria is an important component of an area's overall potential for solitude. A large area has more potential for solitude than a small one (USDA, 1977). The four-part rating scale ranges from VERY LOW to HIGH. The original WARS rating for Size of Area is HIGH (80,000 acres or larger) (USDA Forest Service 1978c).

The size of the WSA has not changed since 1977.

Topographic Screening
The assumption here is that diverse relative relief in the WSA enhances opportunities for solitude by increasing opportunities for screening (USDA Forest Service 1977). The four-part rating scale ranges from MINIMAL/NONE to HIGH.

The original WARS rating for topographic screening is HIGH (contains a diversity of highly dissected topography that easily screens people from one another within short distances) (USDA Forest Service1978c).

Topographic screening in the WSA has not changed since 1977.

Vegetative Screening
This component represents the collective vegetative cover that offers opportunities for screening parties from one another. In areas where vegetative cover is heavy, the sight of other people is reduced (USDA Forest Service 1977). The four-part rating scale ranges from MINIMAL/NONE to DENSE.

The original WARS rating for vegetative screening is DENSE (most of the area has dense vegetation, which screens people from one another, even within a quarter mile, but there is sufficient opening to permit travel and camping without undue concentration) (USDA Forest Service 1978c).

Fires burning in the year 2000 and 2005 removed vegetation in some areas, but when looking at the entire area the overall vegetative screening has basically not changed since 1977. It is still dense overall.

Distance from Perimeter to the Core
A core area of about 50,000 acres composed of the Ross Fork of Rock Creek, headwaters of Copper Creek south of the Copper Creek road, Moose Creek, and the headwaters of Skalkaho and Sleeping Child Creeks contain the highest potential for solitude in the WSA due to good topographic boundaries, size and compactness, and few off-site intrusions. This core area has outstanding opportunities for getting away from others on weekdays, except during hunting season, and the best potential for visual solitude. Civilization appears close at hand near the boundary, most of which is located at midslope, above existing roads, timber harvest, or minerals development. The south end has an ATV trail and is close to timber harvest activity. Winter solitude is impacted by snowmobile trail use and "play" areas.

The distance from the perimeter of the roadless area to the core or approximate geographic center is a measure of the potential for solitude and escape from the evidence of man (USDA, Forest Service 1977). The four-part rating scale ranges from LOW to OUTSTANDING.

The original WARS rating for distance from perimeter to the core was a HIGH (from 3 to 5 miles from the core to the perimeter) (USDA Forest Service 1978c).

Distance from the perimeter to the core of the WSA has not changed since 1977.

Permanent Off-site Intrusions
This includes off-site evidence of man's activities likely to be seen, heard, or smelled by visitors from within the area such as from a transportation corridor (USDA Forest Service 1977). The three-part rating system ranges from MINIMAL/NONE to MANY.

The original WARS rating for permanent off-site intrusions was SOME (off-site intrusions perceptible, but relatively distant and generally not permanent. Some off-site intrusions are close-by, but generally not permanent) (USDA Forest Service 1978c).

In the south a low concentration of users can only be expected on weekdays or away from the Chain of Lakes Trail.

(2009 Wilderness Institute Monitoring): Eighteen encounters were recorded during the 2009 field season. ATV users represented 55 percent of all persons encountered, hiker/backpackers represented 31 percent; 9 percent were associated with UTV use, and 4 percent were associated with motorbike use. Seven motorized noises were reported during the field season, ranging from less than 1 minute within a mile to close to 5 minutes far in the distance. Eleven visual intrusions were observed from within the study area, 82 percent of which were dirt roads. One highway and one clear cut were observed. (p.43, 44, and 45) {Project File document WSA-012.pdf}.

Absence of Recreation Facilities

The absence of facilities component denotes a freedom from man's developments, which is important in affording opportunities to develop and test outdoor skills and to be free of the evidence of man (USDA Forest Service 1977). The rating system ranges from MINIMAL/NONE to HIGHLY DEVELOPED. Recreation facilities are considered campsite development and trails.

The original WARS rating for absence of recreation facilities was MINIMAL/NONE (either no or very few recreation facilities in area; low standard trails, logs over streams, etc.) (USDA Forest Service 1978c).

While the original WARS rating of MINIMAL/NONE adequately describes the campsite facilities as they existed in 1977, it does not adequately describe the trail standards as they existed in 1977. The problem is how the four-part rating scale lumped recreation campsite development and trails together. The rating scale assumes that the level of campsite development (fire rings, fireplaces, toilets, tables, etc.) and level of trail development (low-to- high standard, log crossings to bridges) are in relation to one another. This was not the case in the Sapphire WSA in 1977. Many of the trails were of a higher standard than fits MINIMAL/NONE, and would have better fit MODERATE DEVELOPMENT (trails, at least some built to high standards, some were on primitive roads and excavated firelines, and there were bridges over most streams). The raters either favored rating campsites over the degree of trail development or made the rating after considering certain areas and impacts as "separable" (USDA Forest Service 1978b), and picked a rating description they felt best described the remaining area.

The overall level and type of recreational facilities are essentially the same as in 1977 and, for the same reasons just noted for the original rating, would still fit MODERATE DEVELOPMENT for trails.

Opportunity for Primitive Recreation

Outstanding opportunities for primitive recreation considers the sense of remoteness, closeness to nature, serenity, spirit of adventure, using outdoor skills, high degree of challenge, and risk. In addition to access and the number of people, along with the associated noise considered above, this characteristic considers the type of use and mode of travel. It is characterized by meeting nature on its own terms, without comfort and convenience facilities (USDA Forest Service 1977). Remoteness was not a wilderness quality factor rated in 1978, but is a factor considered since the mid-1990s in evaluating effects on roadless areas.

Opportunities exist for hiking, horseback riding, big and small-game hunting, fishing, and viewing a moderate diversity of vegetation, wildlife, and historic mining activity. The combination of accessible drainage bottoms, gentle ridges, and meadows provides opportunities for cross-country travel. Otherwise there is not a high degree of challenge and risk. The WSA is large enough to provide a range of opportunities.

There appears to be vastness of scale for the motorized user, however opportunities are limited because Trail #313, the main connector trail, is closed for motorized use. This eliminates loop trip opportunities for motorcycles in the north. Throughout the area the degree of challenge and risk for motorcycle rider is provided for more by remoteness than by topography.

Approximately 32 miles of system trail are open to motorcycles. There are approximately 8 miles of system trail open to ATVs that access a high lake basin with moderate degree of challenge and risk. Opportunities are limited for motorcycle users in the north to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale because of the short, in and out trails.

Mountain bike use is becoming popular along the Bitterroot/Rock Creek Divide Trail #313, Chain of Lakes Trail #39, Railroad Creek #77, Weasel Creek #156, Jerry Lake Trail #503, and Sign Creek Trail #40.

Snowmobile opportunities limited by trail closures. There are some off-trail opportunities above 7,000 feet elevation.

(Bitterroot Quiet Use Report – 2008) While some routes historically see heavy use, others are less popular and see little to no motorized activity. No evidence of motorized use on Trails; #83 Kent Lake, #102 Mosquito Meadows, #40 Sign Creek, #168 Moose Creek, #503Skalkaho Cr –Jerry Lake, #77 Railroad Creek, #313 from Skalkaho Pass, and # 156 Weasel Creek{Project File document WSA-029.pdf}.

(2009 Wilderness Institute Monitoring): Overall, single track trails accounted for over 86% of trails monitored. Trails with braided treads accounted for 13% and 1% of trails were double track. Evidence of motorized use was evident on less than 1% of the single track trails and on 2.2 miles of double track trails. Of the non-system trails recorded, 81% were created by foot travel, 6% by ATV use and 3% by horse travel. p.34, 35, and 38{Project File document WSA-012.pdf}.

Diversity

Diversity of vegetation, fish and wildlife, terrain, lakes and streams, and climate improves opportunities for a larger variety of primitive recreation activities (USDA Forest Service 1977). The three-part rating system ranges from LITTLE DIVERSITY to VERY DIVERSE.

The original WARS rating for Diversity was VERY DIVERSE (has much diversity in nearly all the above categories) (USDA Forest Service 1978c).

Diversity of the WSA has not changed since 1977.

Challenge

This component is measured as the number and extent of challenging features such as dangerous animals, climatic disturbance, avalanche potential, terrain features (cliffs, quicksand, sink holes), fast moving water, glaciers, and a lack of dominant visual features on which to orient oneself (USDA Forest Service 1977). The three-part rating system ranges from RARE to MANY.

The original WARS rating for Challenge was FEW (features commonly considered hazardous encountered in area) (USDA Forest Service 1978c).

Challenge in the WSA has not changed since 1977.

Special Features

Special features are those unique geological, biological, ecological, cultural, or scenic features that may be located in the area. Unique fish and wildlife species, unique plants or plant communities, Research Natural Areas, outstanding landscape features such as rock formations, and significant cultural resource sites are some of the items that are considered when analyzing this element.

Features include glacial cirques along the Sapphire Mountain Crest, historic mining activity, meadows, extensive areas of whitebark pine and subalpine larch, and wide panoramas from the major ridges.

Manageability / Boundaries

This element relates to the ability of the Forest Service to manage the area to meet size criteria and the six elements discussed above. Changes in the shape of an area influence how it can be managed. The location of other proposed projects outside the area are also factors to be considered. Boundary management impacts relate to such factors as the need to change boundaries to terrain features that can easily be located,

and the provision of access to the area. Again, manageability/boundaries was not a wilderness quality factor rated in 1978, but is a factor considered since the mid-1990s in evaluating effects on roadless areas.

RARE II area A1941 comprises the roadless area. The following adjustment in net acres has taken place since the RARE II inventory:

Table 3.3- 10: Adjustment in Net Acres in Sapphire since RARE II Inventory

	National Forest		Total Acres
Adjustment	**Deerlodge**	**Bitterroot**	
RARE II inventory	56,515	43,300	98,815
Developed or under contract	0	0	0
Land added to inventory	0	0	0
Refined acreage calculation	+ 17,771	0	-56
Current inventory	**72,414**	**44,116**	**116,530**

Practically all of the current boundary would be difficult to describe and locate since it is midslope, lying above existing roads and/or development. Adjusting boundaries to logical topographic breaks would remove between 40,000 to 50,000 acres from consideration as wilderness; however, doing so would also remove most existing mineral impacts, and would measurably improve opportunities for solitude. It would also eliminate many of the fringes which contain the better growing sites for timber and areas of known mineral potential.

A large core (45 percent of the area) with the highest wilderness attributes has been identified. It is nearly enclosed by high ridgetops which screen out most off-area evidence of civilization, and it encompasses most of the Ross Fork of Rock Creek, Copper Creek, Moose Creek, and the upper reaches of Skalkaho Creek. This boundary adjustment enhances the naturalness and solitude, and retains most of the highest primitive recreation attribute and special features. It also removes productive timber lands that are the most physically suited for development. Most nonconforming uses and development near the roadless area boundary would be excluded. Areas of high mineral potential cannot be separated without seriously eroding wilderness potential.

Wilderness Character Relative to Alternatives

The discussion in this section will focus on changes to wilderness attributes that have occurred since 1977, and how each alternative would either positively or negatively affect those attributes. Table 3.3- 11, Sapphire Wilderness Study Area – Bitterroot NF Portion- Status of Roads and Trail in 1977, 2003, and 2013 and Travel Planning Alternatives, summarizes the changes in motorized routes by trail or road from 1977 to 2013.

SAPPHIRE WILDERNESS STUDY AREA

TABLE 3.3- 11: STATUS OF ROADS AND TRAILS IN 1977, 2005 & 2012 AND TRAVEL PLANNING ACTION ALTERNATIVES

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977	STATUS IN 2013-Existing Condition						CHANGE SINCE 2005	Travel Planning-Alternative 1						Travel Planning-Alternative 3						Travel Planning-Alternative 4						
	Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT		ST	TT		ST	TT		ST	TT		
313.2, Bitterroot Rock Cr Divide: N. end of MWSA to Trail 102.		19					-1933 – 1993 maps all show it. -BNF Travel Plan Map. 1977 -1978 Deerlodge Forest Map - Moore, 1974		19					Little to no ATV use Skalkaho Pass to jct. Trail 83. Mountain bikes use as a loop, begins at Skalkaho Pass and down trail 77. Suspected occasional ATV use from Jct. Trail 83 to Trail 102, but segment remains single track.					22.8		S. end of Trail313.2 is now Abundance Saddle (not Trail 102)					22.8			22.8								22.8		
313.5, Bitterroot Rock Cr Divide: Junction Trail 102 to FR 80		2	8				-1933 – 1993 maps all show it. -BNF Travel Plan Map. 1977 -Portion on BNF is within area closure 15. -1978 Deerlodge Forest Map - Two-track portion is "dozer trail" (Moore, 1974).		1	8		1		Some ATV use Tr. 102 to Rooster Comb, but remains single track. Trail south of Rooster Comb hard to find. User trail drops into basin to east (see "User Rooster Comb bypass" below). Some limited ATV encroachment west of Abundance Saddle. Closure 2005 to motorized Abundance Saddle to Tr. 39 to protect cultural sites. -Jct Trail #39 to FR 80 (5-6 miles) reconstructed in 1995 to reduce erosion.			6.8		1.0		N. end of Trail 313.5 is now Abundance Saddle (not Trail 102)			0.8		1.0	6.0			6.8		1.0						1.0	6.8	
Trail 77, Railroad Creek		2.4					-1972 Bitterroot Forest base map (correct location) - BNF Travel Plan Map. 1977 (incorrect location)		2.4							2.1						New mountain bike use as loop route, begins at Skalkaho Pass. No evidence of motorized use during 2008 monitoring.		2.1						2.1								2.1		
156, Weasel Creek		2					- BNF Travel Plan Map. 1977.		2							1.7						Mountain bike use, no evidence of motorized use in 2008 monitoring.		1.7						1.7								1.7		
Trail 503, Skalkaho-Jerry Lake		4.6					- BNF Travel Plan Map. 1977.		4.6							3.8						Mountain bike use, no evidence of motorized use in 2008 monitoring.		3.8						3.8								3.8		
Trail 87, Skalkaho-Sleeping Child Divide		2	1.75				-1972 Bitterroot Forest Base Map. -1974 USGS (not altogether accurate.) -BNF Travel Plan Map, 1977. -TT portion appears to be 1961 fireline.		2	1.75						*1.3*						A new unauthorized two track route was discovered in 2003 running cross-country north from the Skalkaho-Sleeping Child Divide Trail #87 for approximately 2.25 miles. Two track was signed closed to motorized use in 2005 and		*1.3*						*1.3*								1.3		
83, Kent Lake		0					-1912, 1933; 1972, 1984 maps show no trail to lake; -1993, trail to lake on map. -BNF Travel Plan Map. 1977 incorrectly shows trail 313 on this		1					Constructed approximately 1991 or 1992; light use, no known ATV use.		*0.7*						Trail open seasonally for motorized use from 04/01 - 11/30. No evidence of motorized use during 2008 monitoring					0.7			*0.7*								0.7		
102, Mosquito Meadows		1.6					- BNF Travel Plan Map. 1977.		1.2	0.4				0.4 mile shift from ST to TT.		*1.1*						Trail open seasonally for motorized use from 04/01 - 11/30. Popular snowmobile play area					1.1			*1.1*								1.1		

SAPPHIRE WILDERNESS STUDY AREA

TABLE 3.3- 11: STATUS OF ROADS AND TRAILS IN 1977, 2005 & 2012 AND TRAVEL PLANNING ACTION ALTERNATIVES

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977	STATUS IN 2013-Existing Condition						CHANGE SINCE 2005	Travel Planning-Alternative 1						Travel Planning-Alternative 3						Travel Planning-Alternative 4						
	Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT		ST	TT		ST	TT		ST	TT		
User built (331), Martin Cr Connect - FR 73097 to Trail 330 - (approx. 50-70 yds between Martin Ck. and Trail 330)			0.0							0.03				This trail may or may not be within MWSA (given imprecise definition of MWSA boundary). This short route was cleared for snowmobile access and later used by ATV's. Bridge added over Martin Ck. early 1990s.							Still exists on ground. Trail has been removed from route atlas as it is not a system trail.																				
Trail 330, Martin Creek			6.25				-"Access roads" and fireline (USDA 1961). -Identified in various 1970's documents and maps as "primitive roads", "excavated fireline", "pack trail", "dozer trails", etc. -1970 aerial photos. -Within 1977 BNF Travel Plan Map area closure 15 -1978 WARS rating identifies this trail, trail 39, and early fire roads as "highly impactive"			6.25												Still exists on ground. Trail has been removed from route atlas as it is not a system trail.																				
Trail 332, Lakes Overlook			0							0.1				User developed to a viewpoint over-looking Charity Lake. Drainage improved and segment added to forest trail system about 1995.			0.1				Added to Forest trail system for continued monitoring and maintenance.						0.1			0.1						0.1					0.1
Trail 420, Sula Fish Lake		1					- 1977 location established between 57 and 72 - Within 1977 BNF Travel Plan Map area closure 15					1		In 1993 it was relocated to its current location and restricted to non-motorized uses in 1995.					0.6		Evidence of two track use at top where Trail #39 junctons with #420 but has been signed as closed and motorized use has stopped.					0.6				0.6						0.6					
Trail 421, Faith Lake		2.6					1974 topographic map. -Within 1977 BNF Travel Plan Map area closure 15. - Viavant, 1978.					2.6		Rerouted to reduce erosion. Closed to motorized use 1995.					1.8		Evidence of two track use at top where Trail #39 junctons with #420 but has been signed as closed and motorized use has stopped.					1.8				1.8						1.8					

SAPPHIRE WILDERNESS STUDY AREA

TABLE 3.3- 11: STATUS OF ROADS AND TRAILS IN 1977, 2005 & 2012 AND TRAVEL PLANNING ACTION ALTERNATIVES

ROUTE #	STATUS IN 1977						1977 STATUS BASED UPON	STATUS IN 2005						CHANGE SINCE 1977	STATUS IN 2013-Existing Condition						CHANGE SINCE 2005	Travel Planning-Alternative 1						Travel Planning-Alternative 3						Travel Planning-Alternative 4						
	Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail			Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail		Open Road	Open Trail		Rest. Road	Restr. Trail		
		ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT			ST	TT		ST	TT		ST	TT		ST	TT		ST	TT		
Trail 39, Chain O' Lakes			3.7				- "Access road and fireline in 1961 (USDA 1961). - 1970 aerial photos - "It was felt that 4 x 4 use was causing serious damage, but that vehicles under 40" were not causing serious damage at this time. This area has been managed this way for the past 3 years" and "The 40" width criteria permits distinguishing between trail cycles and larger vehicles (cars and trucks)." (USDA 1976a -Within 1977 BNF Travel Plan Map area closure 15 -Identified in various 1970's documents and maps as "primitive roads", "excavated fireline", "pack trail", "dozer trails", etc. -1978 WARS rating identifies this trail, trail			3.7				Reconstruction 1995 – erosion control: structures, seeding, some rerouting and narrowing (2300 letter, D. Campbell. 7/30/96).			3.4				The 3.4 miles represents the portion of the trail that is within the Sapphire WSA. Popular ATV trail. Deeply rutted in spots due to steepness of trail and use.						3.4					3.4						3.4						3.4
Trail 168, Moose Creek		5.4					- Maps since 1933 - WARS rating worksheet #1 and notes 1-9-78 notes that 3 miles are "moderate" and "inseperable impacts" without explanation (Lindquist, Pandell, Banner, Strong, 1978), but 1974 Bud Moore field notes give no indication of		5.4					Puncheon structure removed in 2002.		5.1					No evidence of motorized use from 2008 monitroing					5.1				5.1						5.1						5.1		
Trail 40, Sign Creek		4.5					-On maps since 1933 in same location		4.5					Some tread loss in open meadow MP 3-4.		5.6					Mountain bike use, no evidence of motorized use in 2008 monitoring.					5.6					5.6						5.6		
TOTAL	**0**	**47.1**	**19.7**	**0**	**0**	**0**		**0**	**43.1**	**20.23**	**0**	**4.6**	**0**		**0**	**21.4**	**10.3**	**0**	**26.2**	**0**		**0**	**8.9**	**0.8**	**0**	**38.7**	**9.5**	**0**	**38.6**	**10.3**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**47.6**	**10.3**	

SS = single track

TT- 2 track

Gauging effects to natural integrity and apparent naturalness are relatively straightforward. It is accomplished by measuring the presence and magnitude of human-induced change to an area (physical impacts like roads and fences). Apparent naturalness is tracked by how the landscape appears to people, even though there may have been some minor human modifications. Travel management planning decisions that may affect these attributes are largely confined to trail disturbances (either through reconstruction or change in use type), and accompanying weed infestations, visual impact from trails, and displacement of or effects to wildlife. Altering the physical engineering of trails (that is converting single-track to double-track) would also affect water movement, soil displacement, and vegetation.

A primitive recreation experience includes the opportunity for solitude, a sense of remoteness, closeness to nature, serenity, and spirit of adventure through the application of woodsmen skills in an environment that offers a high degree of challenge and risk. Such opportunities are normally found in Primitive and Semi-Primitive Non-Motorized classes of the Recreation Opportunity Spectrum (ROS). Impacts related to primitive recreation experiences are normally expressed in changes to the physical setting, activities occurring in the area, and changes to the social experiences of users.

Evaluating effects to remoteness (opportunity for primitive recreation), are typically tracked for two parameters: physical and social. The physical parameters of an area that foster a sense of remoteness, including an area's size, distance from roads, visibility of lights, and sounds associated with civilization, would not change with travel management decisions about appropriate uses of trails in any alternative. When evaluating effects to remoteness, the social aspect of how people travel within an area is an effect often discussed. When areas have historically only been accessed by nonmotorized means, and then decisions are made to allow motorized access, more terrain is readily available to a new user group, which may compromise traditional users' sense of solitude, remoteness, challenge, and risk. At the same time areas that have historically had motorized use and then decisions are made to no longer allow this type of use can limit the challenge, risk and desired experience from an entirely different user group.

Opportunities for solitude were gauged during RARE I and II evaluations using WARS, based primarily on physical features of the area: size, presence of vegetative or topographic screening, and distance from civilization. Travel management planning decisions would not change these parameters relating to solitude in the WSAs in any alternative. However, travel decisions do have the potential to affect peoples' perception of solitude at the time and place they are experiencing them. The presence, volume, and type of other users and the sounds and smell have all been identified as affecting the personal subjective sense of solitude. All of these effects are temporary in nature, and do not affect the attributes of an area that create a sense of solitude.

The purpose of the analysis is to disclose the potential effects of motorized recreation on wilderness attributes, and to determine if, or to what extent, they might affect future designation as wilderness under the Wilderness Act of 1964.

The effects analysis is both quantitative and qualitative. That is, the reduction or increase in road and trail miles by alternative provides a quantitative look at project effects. The extent of effects on travel routes and other recreation opportunities is necessarily a qualitative assessment based on past forest visitor patterns, historical trends, and professional judgment based on experience of the recreation specialists completing this analysis.

Environmental Consequences

The following analysis is based on the issues identified for WSAs. The first issue is that motorized/mechanical transport use on roads and trails in WSAs impacts their wilderness attributes. The measurement indicators are miles of motorized routes and how they affect wilderness attributes.

The second issue involves over-snow vehicle use. Designating areas open to over- snow vehicle use impacts recreation experiences. Measurement indicators are acres of WSAs open to over-snow vehicle use and how they affect wilderness attributes.

Please refer to Table 3.3- 12, below:

Table 3.3- 12: Miles of Motorized/Mechanical Transport Routes and Acres Open to Over-Snow Use in the Sapphire Wilderness Study Area by Alternative

	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Miles Open Roads	0.0	0.0	0.0	0.0
Miles Motorized Trails	9.8	31.8	48.9	0.0
Miles Trails Open to Mechanical Transport	47.6	47.6	47.6	0.0
Acres open to over-snow vehicle use	16,303	37,806	37,806	0.0

Refer to Appendix G of this FEIS, which shows the routes screened for the DEIS. Appendix H shows the changes to routes between the DEIS and the FEIS. Appendix I shows the proposed designations for all routes, including those that were not screened.

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in wilderness study areas (WSAs) impacts their wilderness attributes

Indicator: Miles of motorized routes in the WSAs
Indicator: Effects to wilderness attributes

Effects Common to All Action Alternatives

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with wilderness attributes. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1

Alternative 1 excludes motorized use on 22 miles of existing motorized trails compared with **Alternative 2**. **Alternative 1** would designate 9.8 miles open to motorized use on trails, compared to 31.8 miles open to motorized use on trails in **Alternative 2**. It designates 0 miles open to motorized use on roads, the same as in **Alternative 2**.

The opportunity to use some of these trails would change to nonmotorized use, but the use of the trail is not lost. Visitors could still hike, ride bicycles, or horseback ride on these trails.

Under **Alternative 1**, Trail #39 (Chain of Lakes) would be closed to all motorized use, moving the area towards one of the Recreation standards for MA 5, stated on III-37 (6) "*Pending resolution by Congress, that portion of the management area within the boundary of Montana Study Act areas will be administered according to the goals and standards established for Management Area 6"* (USDA Forest Service 1987a). The goal for MA 6 is *"Pending action by Congress, manage to maintain the presently existing wilderness characteristics and potential for inclusion in the wilderness system."*

Mechanical transport use /mountain Bike travel would be allowed on 47.6 miles of routes, which is the same as **Alternative 2.**

The current management direction that allows motorized wheeled access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 1**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including

inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Along the 22 miles of routes closed to motorized use, **Natural Integrity** will improve to the extent that motorized-induced changes to the areas are able to recover. **Apparent Naturalness** will also improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for Primitive Recreation Experience** will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 9.8 miles of trails designated for motorized use: **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Natural integrity** will decrease to the extent that motorized-induced changes to the area increase. The **Opportunities for Primitive Recreation Experience** will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights sounds and presence of motorized use.

Alternative 2

The Sapphire WSA would retain motorized use on 31.8 miles of existing trails in **Alternative 2**. No roads will be open to motorized use.

Under **Alternative 2**, Trail #39, a very popular trail, would remain open to ATVs and motorcycles resulting in continued erosion of fines and exposing more rock and widening of the trail tread. This would not move the area towards one of the Recreation standards for MA 5, stated on III-37 (6) "*Pending resolution by Congress, that portion of the management area within the boundary of Montana Study Act areas will be administered according to the goals and standards established for Management Area 6"* (USDA Forest Service 1987a). The goal for MA 6 is "*Pending action by Congress, manage to maintain the presently existing wilderness characteristics and potential for inclusion in the wilderness system.*

Mechanical transport use/ mountain bike travel is allowed on 47.6 miles of routes.

As long as motorized use numbers remain constant there will be no change to existing Wilderness attributes. However, as conditions currently exist, the WSA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

The current management direction that allows motorized wheeled access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3

Alternative 3 designates 48.9 miles open to motorized use on trails, which is 17.1 miles more than **Alternative 2**. It retains 0 miles of motorized use on existing open roads, the same as **Alternative 2**.

Under **Alternative 3**, Trail #39, a very popular trail, would remain open to ATVs and motorcycles resulting in continued erosion of fines and exposing more rock and widening of the trail tread. This would not move

the area towards one of the Recreation standards for MA 5, stated on III-37 (6) *"Pending resolution by Congress, that portion of the management area within the boundary of Montana Study Act areas will be administered according to the goals and standards established for Management Area 6"* (USDA Forest Service 1987a). The goal for MA 6 is *"Pending action by Congress, manage to maintain the presently existing wilderness characteristics and potential for inclusion in the wilderness system.*

A number of comments were received on the DEIS regarding Trail #39 (Chain of Lakes), which is proposed to be closed to motorized use in **Alternative 1**. While many commenters acknowledged the resource concerns associated with motorized use, a number questioned whether the trail could be repaired or rerouted, rather than closed. In response to these public comments, **Alternative 3** considers two hypothetical reroutes of problematic areas on Trail #39, and evaluates their merits vis a vis the current Trail #39.

According to trail condition surveys conducted in 2000, 2005, and 2010, there are at least six identified sections on the trail that have unsustainable grades of 25-30 percent (West Fork Trail #39 folder){Project File folder 'material_referenced,' Project File document REFERENCE-001.pdf}. These are contributing to adverse resource effects, as well as causing concern for public health and safety. The hypothetical reroutes would put the trail on a more sustainable grade, eliminating the erosion and widening problems that are now occurring.

The ID Team's trail specialist looked at two options for the trail:

1. The first considered rerouting each of the six sections. This method is described as a "band-aid" approach: the rerouted sections would, typically, be constructed parallel to the existing trail. If they are not built well, and if the existing trail is not properly obliterated, the original route gets reestablished, and use on it continues. Or, two trails become available, which create twice the resource concerns. This option would not solve the resource problems as it would locate the trail on similar unacceptable grade, and could lead to additional damage.
2. A second option looked at a proposed reroute starting at approximately mile post 2.3 and ending at Trail #313. This would require constructing approximately 7.3 miles of new double-track trail, away from the existing trail, with a sustaining grade from 0-10 percent. The existing trail between mile posts 4.26 and 4.75 could still be used. This reroute would result in a trail approximately 10 miles in length, with approximately 6.8 miles located within the Sapphire WSA. Currently, approximately 3.3 miles of the trail are located with the WSA. The estimated cost for this reroute is approximately $134,115.

While the second option would be feasible on-the-ground, there are other considerations. Cost of construction would be a factor as the Forest's budget for trails continues to decrease; however, there could be opportunities utilizing partnerships and external grants. The more important issue would be the effect to wilderness attributes associated with new trail construction in a WSA, as stated in Sec. 3 (a) of the MWSA 1977: "Except as otherwise provided by this section, and subject to existing private rights, the wilderness study areas designated by this Act shall, until Congress determines otherwise, be administered…so as to maintain their **presently existing wilderness character** [emphasis added] and potential for inclusion in the National Wilderness Preservation System" (P.L. 95-150).

The following looks at the second option and its effect on the wilderness attributes associated with new trail construction in the WSA.

Natural Integrity is defined as the extent to which long-term ecological processes are intact and functioning. Impacts to natural integrity are measured by the presence and magnitude of human-induced change to an area. Such impacts include physical developments (for example, roads, trails, utility rights-of-way, fences, lookouts, cabins, recreation developments, livestock grazing, mineral developments, wildlife/fisheries management activities, vegetative manipulation, and fire-suppression activities).

- The physical trail would increase from 6.8 miles to 10 miles (a 32 percent increase since 1977). This additional trail length would increase the potential for all users to introduce invasive plants, particularly in Sections 20 and 29 (now trail-less, and in meadow areas that lack canopy cover along the higher, more exposed ridgeline relocation).
- This additional trail length would increase the potential for person-caused fires and associated fire suppression activities.
- This additional trail length would increase the potential for displacing wildlife and impacting wildlife habitat, particularly in Sections 20 and 29, and during both summer and over-snow seasons.

Apparent Naturalness is achieved when the environment looks natural to most people using the area. It is a measure of importance of visitors' perceptions of human impacts to the area. Even though some long-term ecological processes of an area may have been interrupted, generally the area landscape appears to be affected by forces of nature. If the landscape has been modified by human activity, the evidence is not obvious to the casual observer, or it is disappearing due to natural processes.

- Visitors' perception of apparent naturalness would increase on the one hand due to relocating the trail tread to a sustainable grade and rehabilitating sections of eroded trail, while on the other, it would decrease through adding over 4 miles and 75 flexible waterbars to the length of constructed trail.
- Relocating the additional 4 miles along a higher, more open ridge line will make the constructed trail more visible from multiple adjacent areas.
- There would likely be only minor, short-term impacts to air quality when visitors encountered potentially increased numbers of users along a greater distance of trail.

Opportunities for Primitive Recreation Experience is achieved when the area provides opportunities for isolation from evidence of man, a vastness of scale, feeling a part of the natural environment, having a high degree of challenge and risk, and using outdoor skills characterized by meeting nature on its own terms without comfort or convenience of facilities.

- The relocation project to improve trail sustainability for use by ATVs, by upgrading the design parameters from Trail Class 2 to Trail Class 3 (a more-developed standard than existed in 1977), would decrease opportunities for challenge and risk for all visitors. The trail grade would be 5-5 percent instead of the current 10-25 percent, and the short maximum pitch would be 25 percent instead of the current 35+ percent. The clearing width would increase from 60" to 60-72," and the design turn radius would increase from 6-8' to 8-10'. Adding 75 flexible waterbars would decrease the opportunity to feel isolated from evidence of man or a part of the natural environment for all users.
- A more developed trail standard would likely increase use by less experienced ATV users. An overall increase of motorized use would decrease the opportunity for a primitive recreation experience for all users.

Opportunities for Solitude is defined as the isolation from sights, sounds, presence of others and developments of man, focusing on features of the area that offer users outstanding opportunities for solitude; size of the area, presence of vegetation, and topographic screening rather than focusing on amount of use.

- A more developed trail standard would likely increase use by less experienced ATV users. An overall increase of motorized use would decrease the opportunity for solitude
- Increasing the travel time to destination lakes would increase the perception of remoteness
- Relocating the additional 4 miles along a higher, more open ridge line will make the constructed trail more visible from multiple adjacent areas, decreasing the perception of isolation from other

visitors and the developments of man
- The potential increase in ATV use on a more developed and longer trail length would negatively affect the area's soundscape

Mechanized transport use/mountain bike travel would be allowed on 47.6 miles of routes, which is the same as **Alternative 2**.

The current management direction that allows motorized wheeled vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 3**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Along the 17.1 miles of routes closed to motorized use: **Natural Integrity** will improve to the extent that motorized-induced changes to the area are able to recover. **Apparent Naturalness** will improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for Primitive Recreation Experience** will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and by having more area where all users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will increase with more isolation from the sights sounds and presence of motorized use.

Along the 48.9 miles of trails designated for motorized use: **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Natural integrity** will decrease to the extent that motorized-induced changes to the area increase. **Opportunities for Primitive Recreation Experience** will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights, sounds, and presence of motorized use.

Alternative 4

Alternative 4 excludes all motorized use on roads and trails compared to **Alternative 2**, which is a 48.9 mile reduction.

Under **Alternative 4**, Trail #39 (Chain of Lakes) would be closed to all motorized use, moving the area towards one of the Recreation standards for MA 5, stated on III-37 (6) "*Pending resolution by Congress, that portion of the management area within the boundary of Montana Study Act areas will be administered according to the goals and standards established for Management Area 6"* (USDA Forest Service 1987a). The goal of MA 6 is "*Pending action by Congress, manage to maintain the presently existing wilderness characteristics and potential for inclusion in the wilderness system."*

No mechanical transport use/mountain bike travel would be allowed which is a 47.6 miles reduction when compared to **Alternative 2**.

The opportunity to use some of these trails would change to nonmotorized use, but the use of the trails is not lost; visitors could still hike, ride bicycles, or horseback ride on these trails.

There would be no motorized wheeled access use to dispersed camping in the Sapphire WSA in **Alternative 4** on the Forest.

Along the 48.9 miles of routes closed to motorized use, **Natural Integrity** will improve to the extent that motorized-induced changes to the areas are able to recover. **Apparent Naturalness** will also improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for Primitive Recreation Experience** will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will increase with more isolation from the sights, sounds, and presence of motorized use.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of WSAs open to over-snow vehicle use and effects to wilderness attributes

Effects Common to Alternatives 1, 2, and 3
High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Wilderness attributes would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on wilderness attributes are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
16,303 acres of the Sapphire WSA would be open to over-snow vehicle use in **Alternative 1**, which is 21,503 acres less than **Alternative 2**. A portion of these acres (564) is due to a mountain goat closure that fell in the portion of the WSA open to snowmobiling in **Alternative 2**.

Alternative 2
37,806 acres of the Sapphire WSA would be open to over-snow vehicle use in **Alternative 2**.

Alternative 3
37,806 acres of the Sapphire WSA would be open to over-snow vehicle use in **Alternative 3,** which is the same as **Alternative 2**.

Alternative 4
No acres of the Sapphire WSA would be open to over-snow vehicle use in **Alternative 4**. This would close previously popular snowmobile terrain in this WSA, and would substantially change the primitive recreation and solitude available to nonmotorized users as well as diminishing the recreational opportunity/experience for the motorized user. These new nonmotorized acres would result in beneficial affects to WSA wilderness attributes of solitude and primitive recreation, and natural integrity, related to reducing stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS). Chances of encountering others while recreating are less which enhances those opportunities for solitude

Summary

Summer

Alternative 4 would have largest reduction of miles of routes designated for motorized use (31.8), followed by **Alternative 1** (22). There would be no change with **Alternative 2,** while **Alternative 3** would show a 17 mile increase. Closing motorized routes in WSAs is proposed to preserve their wilderness attributes.

Alternative 3 would have the most miles of motorized routes (48.9), followed by **Alternatives 2** (31.8), and **Alternative 1** (9.8). **Alternative 4** would have no miles.

Alternative 4 would have the most beneficial impact on wilderness attributes, followed by **Alternative 1**, while **Alternatives 2** and **3** would have adverse effects. Under **Alternative 4**, wilderness attributes would improve or increase along the 31.8 miles of routes closed to motorized use. **Alternative 1** would show a 69 percent decrease in the miles of motorized trails. The wilderness attributes would improve or increase along the roads and trails closed to motorized use, but would decline or decrease along the routes remaining open to motorized use.

Alternatives 2 and **3** would not close any roads or trails to motorized use. Consequently, their wilderness attributes would decline or decrease. **Alternative 3**, which would see an increase in the miles of motorized trails, would see a greater decline or decrease.

Over-Snow

Alternative 4 would show the largest reduction in acres open for over-snow vehicle use (37,806), followed by **Alternative 1** (21,503). There would be no change for **Alternatives 2** and **3**.

Alternative 4 would have the most beneficial impact on wilderness attributes, followed by **Alternative 1. Alternatives 2** and **3** would have similar adverse impacts**. Alternative 4** would have no acres open to over-snow vehicle use. Consequently, the wilderness attributes would improve or increase.

Alternative 1 would show a 57 percent decrease in the acres open for over-snow vehicle use.

Alternatives 2 and **3** would show no change in the acres open for over-snow vehicle use. This would adversely impact wilderness attributes of natural integrity, as well as opportunities for solitude and sense of remoteness.

Comparison of Alternatives for Both WSAs

Summer

Combining the 2 WSAs, **Alternative 4** would show the largest reduction of miles of routes designated for motorized use (97.9), followed by **Alternative 1** (50.7). There would be no change with **Alternative 2**, while **Alternative 3** would show an increase of 17 miles.

Alternative 3 would have the most miles of motorized routes (115), followed by **Alternative 2** (97.9), and **Alternative 1** (47.2). **Alternative 4** would have no miles.

Alternative 4 would have the most beneficial impact on wilderness attributes, followed by **Alternative 1**, while **Alternatives 2** and **3** would have adverse effects. Under **Alternative 4**, wilderness attributes would improve or increase along the 97.9 miles of routes closed to motorized use. **Alternative 1** would show a 52 percent decrease in the miles of motorized trails. The wilderness attributes would improve or increase along the roads and trails closed to motorized use, but would decline or decrease along the routes remaining open to motorized use.

Under **Alternatives 1** and **4**, a decrease in the miles of routes available for motorized use has the potential to increase conflict of uses between motorized and nonmotorized uses, to concentrate uses, and to displace some users, depending upon the use the area receives, which has the potential to impact some visitors' recreation experiences. By concentrating motorized activities in smaller areas, it is reasonable to expect that the noise levels would increase in those concentrated use areas, and decrease elsewhere. Individuals that are displaced that may have a strong personal connection to these areas are likely to feel adversely impacted. Users desiring off-road opportunities would experience changes with the closure of unauthorized routes and routes closed for resource reasons.

On the other hand, decreasing the miles of routes for motorized use increases the miles available for nonmotorized uses, providing for additional quiet areas. Fewer road miles and larger nonmotorized areas would provide a greater potential to meet the experiences sought by nonmotorized users.

Nonmotorized users would be able to hike, horseback ride, and bicycle on motorized routes, and could expect encounters with motorized vehicles.

Over-Snow

Combining the 2 WSAs, **Alternative 4** would show the largest reduction in acres open for over-snow vehicle use (99,771), followed by **Alternative 1** (20,609). There would be no change for **Alternatives 2** and **3**.

Alternative 4 would have the most beneficial impact on wilderness attributes, followed by **Alternative 1**. **Alternatives 2** and **3** would have similar impacts; they would adversely impact wilderness attributes of natural integrity, as well as opportunities for solitude and sense of remoteness.

Under **Alternatives 1** and **4**, a decrease in the miles of routes available for motorized use has the potential to increase conflict of uses between motorized and nonmotorized uses, to concentrate uses, and to displace some users, depending upon the use the area receives, which has the potential to impact some visitors' recreation experiences. By concentrating motorized activities in smaller areas, it is reasonable to expect that the noise levels would increase in those concentrated use areas, and decrease elsewhere. Individuals that are displaced that may have a strong personal connection to these areas are likely to feel adversely impacted. Users desiring off-road opportunities would experience changes with the closure of unauthorized routes and routes closed for resource reasons.

On the other hand, decreasing the miles of routes for motorized use increases the miles available for nonmotorized uses, providing for additional quiet areas. Fewer road miles and larger nonmotorized areas would provide a greater potential to meet the experiences sought by nonmotorized users.

D. Inventoried Roadless Areas

Inventoried Roadless Areas (IRAs) are National Forest System lands which have been reviewed by the Forest Service for possible inclusion in the National Wilderness Preservation System. They are areas larger than 5,000 acres in size, or, if less than 5,000 acres, are contiguous to a Designated Wilderness or primitive area. They meet the minimum criteria for wilderness consideration under The Wilderness Act of 1964.

The original inventory of roadless lands took place in the early 1970s through the RARE (Roadless Area Review and Evaluation) I process, and then again in the late 1970s during RARE II. The RARE process evaluated the potential for roadless areas to be included in the National Wilderness Preservation System {Project File folder 'material_referenced,' Project File document REFERENCE-001.pdf}.

Affected Environment

There are eleven IRAs totaling approximately 407,482 acres on the Bitterroot National Forest. Four of these - Sleeping Child, Needle Creek, Swift Creek, and Tolan Creek- are located completely within the Bitterroot National Forest. Seven are shared with adjacent Forests; the Allan Mountain, Blue Joint,

Sapphire, Selway-Bitterroot, and Stony Mountain IRAs are lead managed by the Bitterroot National Forest. The Beaverhead-Deerlodge and Lolo National Forests have the lead responsibilities for the North Bighole and Lolo Creek IRAs, respectively. Portions of two of the IRAs (Selway-Bitterroot 01067 and Blue Joint 01067) were recommended for inclusion as wilderness.

Please see Table 3.3- 13 for a listing of the IRAs, and Figure 3.3 -3 for a map showing the IRAs.

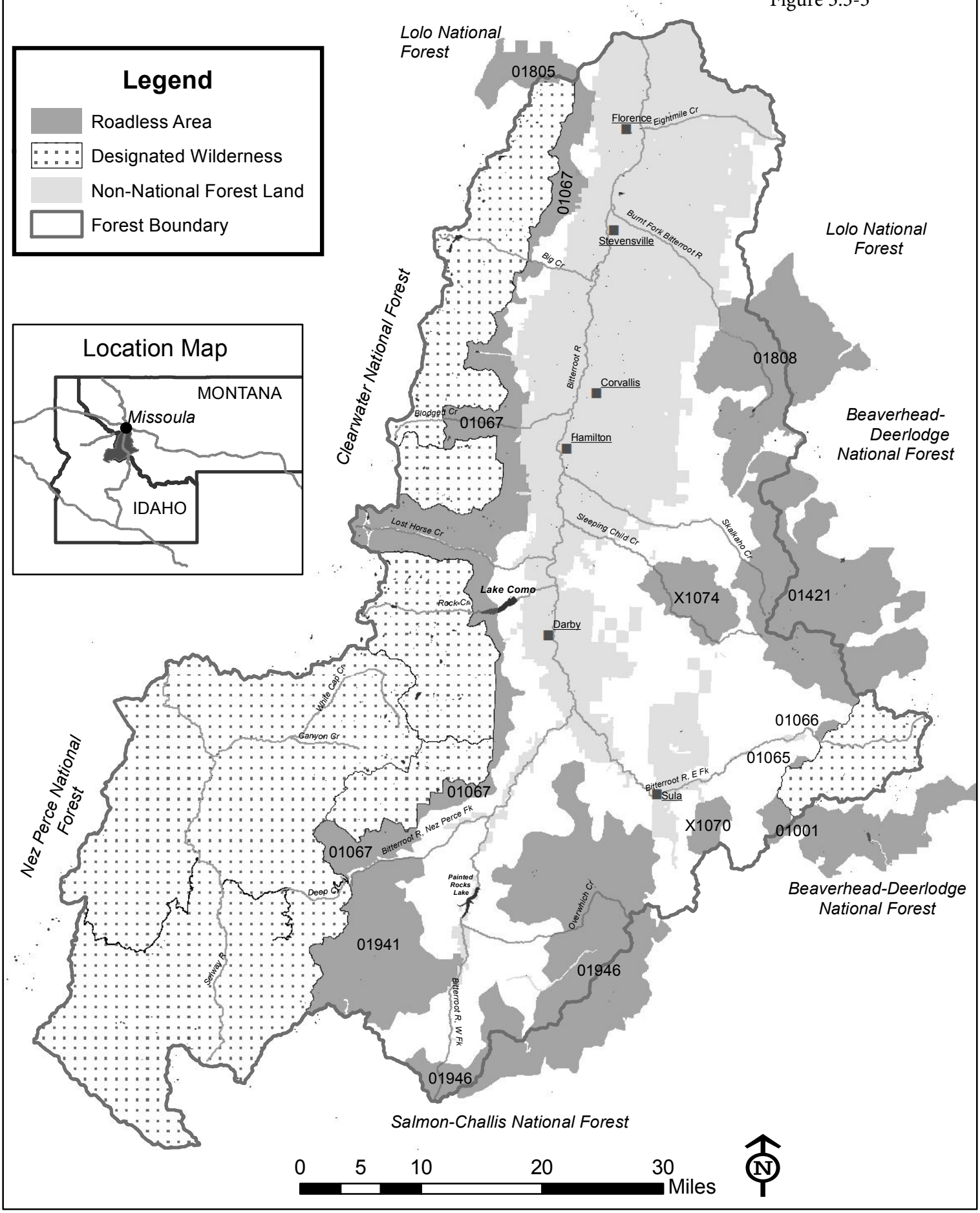
Table 3.3- 13: Inventoried Roadless Areas on the Bitterroot National Forest

IRA No.	Roadless Area Name	Inventoried Roadless Acres[1]	Roadless Area Outside Bitterroot National Forest[1]
01001	North Big Hole	3,679	52,358
01065	Swift Creek	614	
01066	Needle Creek	1,110	
01067	Selway-Bitterroot	115,573	600
01421	Sapphire	43,514	72,185
01805	Lolo Creek	577	14,318
01808	Stony Mountain	44,082	59263
01941	Blue Joint	64,839	409
01946	Allan Mountain	104,025	45,119
X1070	Tolan Creek	7,222	
X1074	Sleeping Child	22,247	
	TOTALS	**407,482**	**216,457**

[1] Acreages in this table were generated by and used for GIS analyses. They will differ slightly from the acres shown in the 1987 Forest Plan.

BITTERROOT NATIONAL FOREST ROADLESS AREAS

Figure 3.3-3



Date: 9/18/2013

With the Bitterroot National Forest Plan, (Forest Plan EIS, 1987), Allan Mountain, Lolo Creek, North Big Hole, Sapphire, Sleeping Child and Stony Mountain IRAs fall into Management Area 5 which states in 111-37, (1*) manage for recreation activities associated with roadless areas, including hiking, hunting, fishing, camping, motor-biking and snowmobiling*. It goes on to say in (2), *the travel plan will identify the areas, trails and roads open for motorized vehicle use and the types of vehicles that are permitted. Motorized use will not be permitted where wildlife, adjacent wilderness, soil and water resources, or public safety are threatened.*

Selway Bitterroot and Blue Joint IRAs include Management Areas 5, 6, and 8a; Swift IRA includes Management Area 1; Needle IRA includes Management Areas 3a, 1, and 2, and Tolan IRA includes Management Areas 1, 2, 3a, and 8a.

Management Area 1 states in III-3, 3.a. Recreation (1) Manage for recreation activities associated with roads and motorized equipment. The recreation opportunity spectrum setting is roaded natural (1987); (3) Pending resolution by Congress, that portion of the management area within the boundary of the Montana Wilderness Study Act areas will be administered according to the goals and standards established for management area 6.

Management Area 2 states in III-9, 3.a. Recreation (1) Manage for recreation activities associated with roads and motorized equipment. The recreation opportunity spectrum setting is roaded natural (1987). Interpretive sites and trails will be compatible with winter range management goals. Off-road vehicle use will be controlled during critical periods on susceptible ranges such as high-use winter range, spring range and densely roaded fall range; (3) Pending resolution by Congress, that portion of the management area within the boundary of the Montana Wilderness Study Act areas will be administered according to the goals and standards established for Management Area 6.

Management Area 3a states in III-16, 3.a. Recreation (1) Manage to provide recreation opportunities associated with main access roads and fishing streams. Most of the area that can be roaded is already roaded. Areas with sensitive soils and steep slopes, including some sites along Skalkaho, Daly, and Sleeping Child Creeks and the West Fork River will remain unroaded. The recreation opportunity spectrum setting is roaded natural (1987); (2) Interpretive sites and trails will be compatible with winter range management goals; (3) Off-road vehicle use will be controlled during critical periods on susceptible ranges such as high-use winter range, spring range and densely roaded fall range; (4) Pending resolution by Congress, that portion of the management area within the boundary of the Montana Wilderness Study Act areas will be administered according to the goals and standards established for management area 6.

Management Area 6 states in III-41, 3.a. Recreation (1) Maintain existing primitive and semi primitive settings (1987). Manage the area essentially free from evidence of human restrictions and controls; (3) Continue current uses which do not detract from wilderness values. Transitory uses such as chainsaws, trailbikes and snowmobiles are appropriate if permitted by the Forests Travel Plan.

Management Area 8a states in III-58, 3.a. Recreation (1) Manage for ROS setting and recreation activities associated with adjacent management areas; (2) Maintain trails and roads that pass through these units for recreation use unless closure is required to meet other resource standards; (3) Pending resolution by Congress, that portion of the management area within the boundary of the Montana Wilderness Study Act areas will be administered according to the goals and standards established for management area 6.

The IRA land base, not unlike most of the land base of the Bitterroot National Forest, predominately hosts a single track trail system (12-24 inches in width) which evolved primarily from the 1900s to about 1940. This system, for the most part, was built to provide access for fire detection and control, mining claims, grazing management, private lands, and Forest Service administrative uses. Trails were constructed to accommodate pack and saddle stock, and were the primary access routes in the Forest. In places, especially along high ridge routes, trails were not carefully planned but rather followed old routes used by Native

Americans, miners, or settlers. Few of the early trails were developed specifically for recreational opportunities or scenic purposes.

There are approximately 1,343 miles of system trails on the Bitterroot National Forest, with about 750 miles within Designated Wilderness and about 593 miles outside of Designated Wilderness. Within the 11 IRAs on the Forest, there are 399 miles of trail, of which about 312 miles are open to motorized vehicles; these miles are also open to mechanical transport (bicycle) use. The number of miles of trail closed to motorized use in all IRAs but open to mechanical use is 78.6. About 9 miles of roads are open for motorized use in the IRAs. Please see Table 3.3- 14 for a listing of the miles of open roads and trails within the IRAs.

Table 3.3- 14: Miles of Open Road and Motorized Trails within IRAs

IRA No.	IRA Name	Miles Open Road	Miles Motorized Trail
01001	North Big Hole	0.00	3.27
01065	Swift Creek	0.00	0.93
01066	Needle Creek	0.00	1.39
01067	Selway-Bitterroot	2.68	29.45
01421	Sapphire	0.59	31.52
01805	Lolo Creek	0.00	0.00
01808	Stony Mountain	0.83	47.88
01941	Blue Joint	4.52	61.50
01946	Allan Mountain	0.29	92.51
X1070	Tolan Creek	0.00	7.46
X1074	Sleeping Child	0.26	35.90
	Total Miles	**9.17**	**311.81**

The trails in the IRAs receive varying amounts of maintenance, and in some areas the usable trail system mileage is less due to trails not being logged out or brushed open for a number of years. Annually, trails are maintained through a combination of contracts, agency crews, volunteers and partners. Currently, annual budgets supporting trail maintenance work are insufficient to maintain all the miles of the Forest's trail system to standard in the IRAs.

Approximately 394,660 acres in the IRAs are open to over-snow vehicle use. When the Bitterroot National Forest Plan was issued in 1987, winter cross country travel was not assessed. The lack of assessment was probably due to winter recreational motorized use being either non-existent or negligible in the mid-1980s. Snowmobiling technology in 1987 may not have been capable for providing this opportunity in the steep, rugged terrain of these areas, due to the power necessary to climb the slopes and also due to the limited fuel capacity the machines had. Snowmobile technology has changed rapidly in recent years, making larger, more powerful, and quieter machines available. These new machines let people access previously inaccessible backcountry.

Snowmobiling use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year and some for only a short term basis. As a transitory winter use, snowmobile use leaves few visible signs of past use. The roadless areas on the Bitterroot National Forest hold special values for many individuals. This large expanse of wild land is home to wildlife, pure water, native fisheries, outstanding primitive recreation opportunities, beautiful scenery, and unique geologic, historic, and cultural features. This combination of attributes and empty spaces create a rare and unique setting in a world where ever-increasing urbanization, population increases, and modification of the natural environment are more the norm. Many people have expressed their feelings that

maintaining the integrity of these wild lands is important to them, even if they may never have an opportunity to experience them first hand.

Some people believe that off-highway vehicles (OHVs) are damaging the physical environment in the inventoried roadless areas, and changing the amenity values of the roadless setting. Other people believe that there is a long history of motorized travel within these roadless areas, and that the physical and amenity values are not harmed by OHV use.

Environmental Consequences

Following is a description of each of the 11 roadless areas, and an evaluation of the effects to wilderness potential. The analysis is based on issues identified for inventoried roadless areas, and the following units of measure are used to assist with predicting and characterizing consequences:

The first issue is that motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics. Measurement indicators are miles of motorized routes in IRAs, and effects to roadless area characteristics.

Table 3.3- 15: Miles of Open Road and Motorized Trails within IRAs by Alternative

	Alternative 1		Alternative 2 (Existing Condition)		Alternative 3		Alternative 4	
IRA Name	**Miles Open Road**	**Miles Motorized Trail**	**Miles Open Road**	**Miles Motorized Trail**	**Miles Open Road**	**Miles Motorized Trail**	**Miles Open Road**	**Miles Motorized Trail**
North Big Hole	0.00	0.29	0.00	3.27	0.00	3.27	0.00	0.00
Swift Creek	0.00	0.00	0.00	0.93	0.00	0.93	0.00	0.00
Needle Creek	0.00	1.39	0.00	1.39	0.00	1.39	0.00	0.00
Selway-Bitterroot	2.68	9.78	2.68	29.45	2.68	57.56	2.36	0.00
Sapphire	0.57	10.99	0.59	31.52	0.59	43.52	0.57	0.00
Lolo Creek	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stony Mountain	0.13	0.00	0.83	47.88	0.83	53.27	0.13	0.00
Blue Joint	1.32	36.95	4.52	61.50	4.52	61.50	0.98	0.00
Allan Mountain	0.29	63.82	0.29	92.51	0.29	94.49	0.00	0.02
Tolan Creek	0.00	0.07	0.00	7.46	0.00	7.46	0.00	0.00
Sleeping Child	0.26	35.46	0.26	35.90	0.26	37.70	0.26	1.56
Total Miles	**5.25**	**158.75**	**9.17**	**311.81**	**9.17**	**361.09**	**4.30**	**1.58**

The second issue involves use-over snow vehicles. Designating areas open to over-snow vehicle use impacts recreation experiences. The measurement indicators are acres of IRAs open to over-snow vehicle use, and effects to roadless characteristics.

Table 3.3- 16: Miles of Acres Open to Over-Snow Vehicles within IRAs by Alternative

	Alternative 1	Alternative 2 (Existing Condition)	Alternative 3	Alternative 4
IRA Name	**Acres Open to Over-Snow Vehicles**	**Acres Open to Over-Snow Vehicles**	**Acres Open to Over-Snow Vehicles**	**Acres Open to Over-Snow Vehicles**
North Big Hole	3,679	3,679	3,679	0
Swift Creek	0	614	614	0
Needle Creek	0	1,100	1,100	0
Selway-Bitterroot	37,970	105,352	106, 038	0

	Alternative 1	Alternative 2 (Existing Condition)	Alternative 3	Alternative 4
IRA Name	**Acres Open to Over-Snow Vehicles**	**Acres Open to Over-Snow Vehicles**	**Acres Open to Over-Snow Vehicles**	**Acres Open to Over-Snow Vehicles**
Sapphire	22,279	43,514	43,514	0
Lolo Creek	0	577	577	0
Stony Mountain-open yearlong	9,847	38,146	38,146	0
Stony Mountain – open seasonally	1,911	5,605	5,605	1,911
Blue Joint	4,957	62,569	62,569	0
Allan Mountain	104,025	104, 025	104, 025	0
Tolan Creek-Open yearlong	1,080	1,080	1,080	1,080
Tolan Creek – open seasonally	6,142	6,142	6,142	6,142
Sleeping Child				
Total Acres	**214,137**	**394,660**	**395,346**	**9,133**

North Big Hole Roadless Area (01001)

Existing Condition

The North Big Creek Roadless Area contains 3.3 miles of road open yearlong to single track vehicles. The entire portion of the IRA in the Bitterroot National Forest is open to over-snow vehicles yearlong. 3.3 miles of trails are open to mountain bikes.

Affected Environment

The North Big Hole Roadless Area is comprised of seven smaller adjacent areas on or near the boundary between the Bitterroot and Beaverhead National Forests. The total acreage for this IRA is 56,037, with 3,679 acres (6.6 percent) on the Bitterroot National Forest.

The Beaverhead and Bitterroot Forests share the North Big Hole Roadless Area, with the Bitterroot having about seven percent of the area. The units in this roadless area lie in the northwest portion of the Big Hole Planning Unit, primarily bordering the Anaconda-Pintler along the southern and southeastern edges. The portion of area 1-001 administered by the Bitterroot National Forest lies on the extreme southern boundary of the Anaconda-Pintler Wilderness Area and adjacent along the Continental Divide to the Beaverhead A1-001 unit. On the Beaverhead, the North Big Hole Roadless Area extends from Seymour Creek in 1-001B to Johnson Creek, bordering area C1-001.

Area 1-001A 1s located centrally in 1-001 from Pintler Creek on the west and bordered by Area Al-001, extending as far as the east edge of Section 11. R. 15 W., T. 1 N. and terminating at Area 1-00C. The Anaconda-Pintler Wilderness forms the northern boundary, and on the south are developed forest lands. The area is accessible from Montana State Highway No. 43 via Forest roads No. 1203 and No. 185. At Pintler Creek, Area 1-001A also defines the western edge of the Wise River Ranger District.

Area 1-001B shares the northeastern edge of the Beaverhead National Forest boundary with the Anaconda-Pintler Wilderness on the north. Area 1-001B is accessible from Forest road No. 934 off Montana State Highway No. 274, Developed forest lands reach approximately four miles south to the Forest boundary. Mayor drainages are Seymour Creek, Chub Creek, and East Fork LaMarche Creek.

Area 1-001C occupies a larger area between 1-001A and 1-001B, bordered on the northern edge by the Anaconda-Pintler Wilderness and on the south by developed Forest lands, within two to three miles from

the southern Forest boundary. LaMarche Creek drains through the eastern end of 1-001C; Mudd Creek through the west sections. Other drainages include the Middle Fork Fishtrap and Swamp Creek. This area is accessed by Forest roads No. 1223, No. 1203 and No. 935 from State Highway No. 43.

The Anaconda-Pintler Wilderness and area B1-001 form the northern boundary of Area A1-001. It is almost divided by developments around Mussigbrod Lake; the north edge of C1-001 borders the area at Sections 10 and 11, R. 17 W., T. 1 S. Forest road No. 1245 edges the west end of Al-001 near Bender Point and a narrow arm approximately one-half mile wide and four miles long extends west from the area at the Continental Divide. Forest roads No. 1245, No. 5732, and No. 185 also provide access to A1-001. Drainages flowing through the area are Bender, Plimpton, Thompson, Howell and Pintler Creeks. Campgrounds and public access are provided at Bender, Thompson and Johnson Creeks. Glacial troughs in this area are very narrow and rocky.

Area B1-001 is a more remote one situated between the Anaconda-Pintler Wilderness on the north and by A1-001 on the south. It is accessed by trails No. 372 and No. 379 from Mussigbrod Lake and from trail No. 110 along the Continental Divide from Forest road No. 1137. Hellroaring Creek and Mussigbrod Creek drain through the area. Sections of this area have been strongly glaciated and contain steep, rugged peaks, high rocky cirque basins, and deep U-shaped glacial troughs. Area Bl-001 is also characterized by light forest containing open ridges and terrain. Outstanding scenic features include rock spires, historical rifle pits and unconfirmed but assumed teepee rings.

Area C1-001 reaches southward from A1-001 at Sections 1 and 11, R.17 W., T. 1 S. as far as Johnson Creek and Forest road No. 1137 at its southwest margin. The boundary on the southeast excludes Forest road No. 1203.1. The only major drainage, Bender Creek, flows northward to the Big Hole River through this roadless area.

Area Dl-001 is completely surrounded on its north by area Al-001 and the Forest boundary edges Its south side at Sections 2, 3, and 10 of R. 16 W., T. 1 S. The main feature of the area is the 102-acre Mussigbrod Lake, which is accessed by Forest roads No. 5732 or No. 185.

The Bitterroot portion is bordered on the east by the Anaconda-Pintler Wilderness, on the south by Al-001, and the remainder by roads and areas of timber harvest.

These roadless areas are comprised of the gentle to moderately steep foothills of the Anaconda Range. Deep U-shaped glacial trough valleys cut across the unit at Plimpton, Mussigbrod, Thompson, Howell and Pintler Creeks which flow southeast to the Big Hole River. Other major drainages are Seymour, LaMarche, Mudd, Bender and Johnson Creeks. Some of these canyons are very narrow and rocky. Well-defined terminal glacial moraines fan out at the mouths of each of these valleys. Elevations vary only moderately from 6300 to 8800 feet. Average annual precipitation is 25-30 Inches, 70 percent of which occurs as snow.

Soils in the upper elevational portion of the areas are shallow, weakly developed, coarse loamy sands. Soils In the moraines are stony, sandy loams. Parent materials in this area are granitic rocks. Soils on the non-glaciated gentle ridges are deep and moderately deep loams and fine sandy loams.

Vegetative cover is predominantly forest with subalpine fir, grouse whortleberry, lodgepole pine, and some Douglas-fir and spruce types. Valley bottoms contain willow and wet meadow at lower elevations and grade into aspen and Engelmann spruce at higher elevations.

This area is not recommended for wilderness designation in the Bitterroot National Forest Plan

Assessment of Roadless Characteristics

Natural Integrity

The Bitterroot portion of l-001 is still quite natural appearing and the natural integrity of the area would be rated high. There may be minor grazing impacts. Numerous helispots were created for fire suppression in 1978, and vegetation is recovering.

Apparent Naturalness
As a whole, the North Big Hole Roadless Area has retained much of its natural appearance. Man's influence is evident primarily through range developments, and trails, limited campground facilities, and simple bridges. These impacts are relatively localized and, in most cases, are screened by the broken topography and vegetation in the area.

A total of 3 system trails totaling 3.3 miles are within, or border, the IRA. These trails are obvious to most users. To the north and west of the Bitterroot portion are roads with seasonal restrictions. To the east, beyond trail #462 there is the Anaconda-Pintler Wilderness, and to the south east lies the Continental Divide trail.

Opportunity for Solitude-Remoteness
Outstanding opportunities for solitude are provided by the broken topography, vegetative screening and relatively light use on or off trail except during hunting season. The Anaconda-Pintler wilderness is directly to the east, and approximately 1 mile wide area of roadless area lies to the south, on the Beaverhead Deerlodge National Forest.

Less opportunity for visual solitude on the western and northern flanks close to timber harvest activities and roads.

Opportunity for Primitive Recreation
The small size of the area limits challenge and risk, though there is avalanche terrain. There are opportunities for hiking, backpacking, horseback riding, hunting, backcountry skiing and camping. The area borders the Anaconda-Pintler Wilderness, which is to the east.

No ATV trails are in the IRA. Opportunities are limited for motorcycle users on 3.3 miles of trail, to experience a low concentration of other users in an area that appears predominately natural, because of the small size of the area.

Snowmobile opportunities are limited although the IRA is open yearlong to snowmobiles.

Special Features
Freshwater clams are found in some streams in the roadless area.

Environmental Consequences

Table 3.3- 17: Miles of Open Roads and Open and Closed Motorized Trails within the North Big Hole IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
North Big Hole (3,679 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0		0		0		0	
Roads Open Seasonally	0		0		0		0	
Trails Closed to all Motorized (System Trails/OHV Roads)	3	3	0	0	0	0	3.3	3.3
Open to Single-Track:								
Yearlong	0	0	3.3	3.3	0.4	0.4	0	0
Seasonal	0	0	0	0	2.9	2.9	0	0
Open to Double-Track:								
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0.3	0.3	0	0	0	0	0	0

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
North Big Hole (3,679 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Unauthorized Trails Authorized in the Alternative (Count/Miles)	0	0			0	0	0	0
Approx. Acres Open to Snowmobiles Yearlong	3,679		3,679		3,679		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	3.3		3.3		3.3		3.3	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRA
Indicator: Effects to roadless area characteristics

Effects Common to All Action Alternatives

All alternatives allow some motorized vehicle travel that will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1
Alternative 1 excludes motorized use on 3.0 miles of existing motorized trails compared with **Alternative 2**, which does not exclude motorized use on existing motorized trails. **Alternative 1** would designate 0.3 mile open to motorized use on trails, compared to 3.3 miles open to motorized use on trails in **Alternative 2**. It designates 3.0 miles open to motorized use on roads, compared to no miles open in **Alternative 2**.

Along the 3.0 miles of trails closed to motorized use, Natural Integrity will improve to the extent that motorized-induced changes to the areas are able to recover. Apparent Naturalness will also improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 0.3 mile of trails designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced

changes to the area increase. The Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 3.3 miles of routes, which is the same as in **Alternative 2**.

For **Alternative 1** wheeled motorized vehicle use to dispersed camping would be allowed in the North Big Hole IRA.

Alternative 2
The IRA would retain motorized use on 3.3 miles of existing trails.

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 3.3 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under Alternative 2. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3
Alternative 3 would retain motorized use on 3.3 miles of existing trails, which is similar to **Alternative 2**.

In **Alternative 3**, the same as in **Alternative 2**, as long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

Along the 3.3 miles of trails designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 3.3 miles of routes, which is the same as in **Alternative 2**.

For **Alternative 3** wheeled motorized vehicle use to dispersed camping would be allowed in the North Big Hole IRA.

Alternative 4
Alternative 4 excludes motorized use on 3.3 miles of existing motorized trail, all of which are open to motorized use in **Alternative 2**.

Along the 3.3 miles of routes closed to motorized use: **Natural integrity** will improve to the extent that motorized-induced changes to the area are able to recover. **Apparent naturalness** will improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for primitive recreation experience** will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. **Opportunities for solitude** will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 3.3 miles of routes, which is the same as in **Alternative 2**.

In the North Big Hole, IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in these areas in **Alternative 4.**

Over-Snow

Designating areas open to over-snow vehicle use impacts recreation experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to Alternatives 1, 2 and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicle users, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow use.

Snowmobiles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that snowmobile use would expand into some lightly used portions of the Forest under this alternative.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of past use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of the FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflict of use and safety issues between motorized and nonmotorized over-snow users could continue and possibly escalate is users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
3,679 acres of the North Big Hole IRA would be open to over-snow vehicle use in **Alternative 1**, which is the same as in **Alternative 2**.

Alternative 2
3,679 acres of the North Big Hole IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
3,679 acres of the North Big Hole IRA would be open to over-snow vehicle use in **Alternative 3,** which is the same as **Alternative 2**.

Alternative 4

No acres of the North Big Hole IRA would be open to over-snow vehicle use in **Alternative 4**. This would close over-snow vehicle terrain in this IRA, though due to its small size, it has not been a popular destination. These new nonmotorized acres would result in beneficial affects to the roadless characteristics of natural integrity, and solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows.

Table 3.3- 18: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

North Big Hole IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	++
Routes designated open for motorized use- Miles	0.3	3.3	3.3	0
Miles of Open Road	0	0	0	0
Trails closed to all Motorized- Miles	3.0	0	0	3.3
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, , Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	- -	- -	- -	++
Acres open to snowmobiles	3,679	3,679	3,679	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Swift Creek Roadless Area (01065)

Existing Condition

The Swift Creek Roadless Area contains 0.9 mile of motorized trails open yearlong to single track vehicles. 614 acres are open yearlong to snowmobiles. 0.9 mile of trails are open to mountain bikes.

Affected Environment

This is a small IRA at 614 acres, but is contiguous with the Anaconda-Pintler Wilderness. It is located in southeast Ravalli County; Montana. Hamilton, the county seat, is about 32 air miles to the northwest. The Anaconda-Pintler Wilderness borders the south boundary. Remaining lands outside the boundary have been developed for timber production. Access to the area is from U.S. Highway 93, the East Fork Road, and Forest roads along the boundary. The Swift Creek Trail passes through the middle of the area providing access to the adjoining wilderness.

The area includes a portion of Swift Creek, headwaters of which are in the adjoining wilderness. Elevations range from 5,600 to 7,000 feet. Forests cover most of the area. Lodgepole pine is the primary tree species, with some large Douglas-fir and ponderosa pine on south facing slopes. Ground cover is mostly beargrass and huckleberry with Idaho fescue and pinegrass on warmer sites and open ridges.

The Swift Creek IRA is not recommended for Wilderness in the Bitterroot National Forest Plan.

Assessment of Roadless Characteristics

Natural Integrity

The natural integrity of the area is intact and the area appears natural to visitors. Grazing impacts are minor. Non system trail exists to hunting camps.

Apparent Naturalness

The area appears natural to visitors. Area is unimpaired other than one system trail totaling .9 miles is within the IRA. This trail is obvious to most users.

Opportunity for Solitude- Remoteness

Opportunities for solitude are low because the area is small and proximate human activities are visible from within the area, Dense timber screens most news and reduces sounds of human activities, although these sounds occasionally penetrate the entire area. The adjacent Anaconda-Pintler Wilderness enhances solitude.

Opportunity for Primitive Recreation

While the opportunity to pursue primitive recreation exists, the lack of special attractions or unique features has limited recreation use primarily to hunting. Challenging opportunities are rare. Small size limits challenge and risk. No trails are open to ATVs. Motorcyclists have little opportunity on 0.9 miles of system trail open to motorcycles. Opportunities are limited for motorcycle users to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale because of the size of the area.

Snowmobile opportunities off-trail in burned area are limited by size.

Special features

The area contains no special features.

Environmental Consequences

Table 3.3- 19: Summary of miles of Open Roads and Open and Closed Motorized Trails within the Swift Creek IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Swift Creek (614 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0		0		0		0	
Roads Open Seasonally	0		0		0		0	
Trails Closed to all Motorized	0.9	0.9	0	0	0	0	0.9	0.9
Open to Single-Track:								
Yearlong	0	0	0.9	0.9	0.9	0.9	0	0
Seasonal	0	0	0	0	0	0	0	0
Open to Double-Track:								

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Swift Creek (614 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0	0	0	0	0	0	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	0	0			0	0	0	0
Approx. Acres Open to Snowmobiles Yearlong	0		614		614		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	0.9		0.9		0.9		0.9	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Alternatives 2 and 3

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1
0.9 miles of trail are closed to all motorized vehicles in **Alternative 1**, which is 0.9 mile less than **Alternative 2.**

Along the 0.9 mile of routes closed to motorized use: **Natural integrity** will improve to the extent that motorized-induced changes to the area are able to recover. **Apparent naturalness** will improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for primitive recreation experience** will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. **Opportunities for solitude** will increase with more isolation from the sights sounds and presence of motorized use.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes.

These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Mountain bike travel would be allowed on 0.9 mile of routes, which is the same as **Alternative 2**.

In the Swift Creek IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 1.**

Alternative 2
0.9 miles of trail are designated open to single track motorized vehicles

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 0.9 miles of routes.

In the Swift Creek IRA, there would be wheeled motorized vehicle use to dispersed camping under **Alternative 2**.

Alternative 3
0.9 miles of trail are designated open to single track motorized vehicles, which is the same as **Alternative 2**.

As in **Alternative 2**, as long as motorized user numbers remain constant there will be no change to existing roadless characteristics in **Alternative 3**. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: **Natural Integrity** will decrease to the extent that motorized-induced changes to the area increase. **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Opportunities for Primitive Recreation Experience** will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 0.9 mile of routes, which is the same as in **Alternative 2.**

In the Swift Creek IRA, there would be wheeled motorized vehicle use to dispersed camping under **Alternative 3.**

Alternative 4
Alternative 4 excludes motorized use on 0.9 mile of existing motorized trail, all of which are open to motorized use in **Alternative 2**.

Along the 0.9 mile of routes closed to motorized use: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of

scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 0.9 mile of routes, which is the same as in **Alternative 2**.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

In the Swift Creek IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 4**.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to Alternatives 2 and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
No acres of the Swift Creek IRA would be open to over-snow vehicle use in **Alternative 1**, which is 614 acres less than in **Alternative 2**. This would close over-snow vehicle terrain in this IRA, though due to its small size, it has not been a popular destination. These new nonmotorized acres would result in beneficial affects to the roadless characteristics of natural integrity, and solitude and primitive recreation.

Alternative 2
614 acres of the Swift Creek IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
614 acres of the Swift Creek IRA would be open to over-snow vehicle use in **Alternative 3**, which is the same as **Alternative 2**.

Alternative 4
No acres of the Swift Creek IRA would be open to over-snow vehicle use in **Alternative 4**. This would close over-snow vehicle terrain in this IRA, though due to its small size, it has not been a popular destination. These new nonmotorized acres would result in beneficial affects to the roadless characteristics of natural integrity, and solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows:

Table 3.3- 20: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

Swift Creek IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	++	-	-	++
Routes designated open for motorized use- Miles	0	0.9	0.9	0
Miles of Open Road	0	0	0	0
Trails closed to all Motorized- Miles	0.9	0	0	0.9
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, , Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	++	- -	- -	-
Acres open to snowmobiles	0	614	614	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Needle Creek Roadless Area (01066)

Existing Condition
The Needle Creek Roadless Area contains 1.4 miles of trails open yearlong to single track vehicles. The entire IRA is open to snowmobiles yearlong. 1.4 miles of trails are open to mountain bikes. There are no miles of unauthorized routes that are authorized.

Affected Environment
Needle Creek IRA lies entirely on the Bitterroot National Forest, and is 1,110 acres in size.

It is located in southeast Ravalli County, Montana. Hamilton, the county seat, is about 30 air miles to the northwest. The Anaconda-Pintler Wilderness borders the eastern boundary. The southeast boundary parallels the East Fork Road which ends at a major trailhead near the present wilderness boundary. Most remaining lands outside the boundary have been developed for timber production. Access to the area is from U.S. Highway 93 and the East Fork Road. Trail #434 passes through the area and provides access along the western boundary of the adjoining wilderness.

The area includes all but the very lower portion of the Needle Creek drainage. Elevations range from about 5,400 to 7,000 feet.

Forests cover most of the area, interspersed with several rocky talus slopes. North-facing slopes have mostly lodgepole pine, and south-facing slopes have Douglas-fir with scattered, large ponderosa pane. Ground cover is beargrass and huckleberry with bunchgrass on the warmer sites.

This area is not recommended for wilderness designation in the Forest Plan.

Assessment of Roadless Characteristics

Natural Integrity

The natural integrity of this area is unaltered and the area has a natural appearance to users. Little-to-no camping impacts. Little to no grazing.

Apparent Naturalness

Unimpaired other than one system trail totaling 1.4 miles is within, or borders, the IRA. This trail is obvious to most users. ATV incursions at beginning of Needle Creek Trail #434 in 2008 and also Trail #434 has been mentioned by the mountain bike riders as a popular ride for the.

Opportunity for Solitude-Remoteness

Opportunities for solitude are diminished by the small size of the area, little diversity, limited challenge and risk, and roads which bound two-thirds of the perimeter. It is separated from the Anaconda-Pintler Wilderness by a prominent ridge. Opportunities exist to be away from others except during hunting season.

Opportunity for Primitive Recreation

Primitive recreation opportunities are limited to short duration hikes, big game hunting and berry picking. No ATV trails. Snowmobiles limited by small size and trees.

Opportunities are limited for motorcycle users on 1.4 miles of trail, to experience a low concentration of other users in an area that appears predominately natural, because of the small size of the area.

Special features

There are no special features.

Environmental Consequences

Table 3.3- 21: Summary of miles of Open Roads and Open and Closed Motorized Trails within Needle Creek IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Needle Creek (1,110 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0		0		0		0	
Roads Open Seasonally	0		0		0		0	
Trails Closed to all Motorized (System Trails/OHV Roads)	0	0	0	0	0	0	1.4	1.4

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Needle Creek (1,110 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Open to Single-Track:								
Yearlong	1.4	1.4	1.4	1.4	1.4	1.4	0	0
Seasonal	0	0	0	0	0	0	0	0
Open to Double-Track:								
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0	0	0	0	0	0	0	0
Unauthorized Routes Authorized in the Alternative (Count/Miles)	0	0			0	0	0	0
Approx. Acres Open to Snowmobiles Yearlong	0		1,110		1,110		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	1.4		1.4		1.4		1.4	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Alternatives 1, 2, and 3

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1
1.4 miles of trail are designated open to single track motorized vehicles which is the same as **Alternative 2**.

As in **Alternative 2**, as long as motorized user numbers remain constant, there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity,

less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 1.4 miles of routes, which is the same as **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under Alternative 1. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 2
1.4 miles of trail are designated open to single track motorized vehicles

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 1.4 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in

Alternative 3
1.4 miles of trail are designated open to single track motorized vehicles, which is the same as **Alternative 2.**

As in **Alternative 2,** as long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less **Natural Integrity**, less **Apparent Naturalness**, fewer **Opportunities for Primitive Recreation Experience**, and fewer **Opportunities for Solitude** compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: **Natural Integrity** will decrease to the extent that motorized-induced changes to the area increase. **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Opportunities for Primitive Recreation Experience** will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 1.4 miles of routes, which is the same as in **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 3**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 1.4 miles of existing motorized trails, all of which are open to motorized use in **Alternative 2**.

Along the 1.4 miles of routes closed to motorized use: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 1.4 miles of routes, which is the same as in **Alternative 2**.

In Needle Creek IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in these areas in **Alterative 4**.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to Alternatives 2 and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
No acres of the Needle Creek IRA would be open to over-snow vehicle use in **Alternative 1**, which is 1,110 acres less than in **Alternative 2**. Compared to **Alternative 2**, this would close over-snow vehicle terrain in this IRA, though due to its small size, it has not been a popular destination. These new nonmotorized acres would result in beneficial affects to the IRA roadless characteristics of solitude and primitive recreation.

Alternative 2
1,110 acres of the Needle Creek IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
1,110 acres of the Needle Creek IRA would be open to over-snow vehicle use in **Alternative 3,** which is the same as **Alternative 2**.

Alternative 4
No acres of the Needle Creek IRA would be open to over-snow vehicle use in **Alternative 4**, which is 1,110 acres less compared to **Alternative 2**. This would close over-snow vehicle terrain in this IRA, though due to its small size, it has not been a popular destination. These new nonmotorized acres would result in beneficial affects to the roadless characteristics of solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows.

Table 3.3- 22: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

Needle IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	-	-	++
Routes designated open for motorized use- Miles	1.4	1.4	1.4	0
Miles of Open Road	0	0	0	0
Trails closed to all Motorized- Miles	0	0	0	1.4
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	++	- -	- -	++
Acres open to snowmobiles	0	1,110	1,110	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Selway-Bitterroot Roadless Area (01067)

Existing Condition

The Selway-Bitterroot Roadless Area contains 0.9 mile of road open yearlong, 1.8 miles of road open seasonally, 29.4 miles of motorized trails open yearlong to single track vehicles. 105,352 acres are open yearlong to snowmobiles. 75.8 miles of trails are open to mountain bikes.

Affected Environment

The Bitterroot Forest portion of this roadless area is 115,573 acres, with the entire Selway- Bitterroot Roadless Area totaling 116,173 acres. The other 600 acres are in the Nez Perce National Forest, in the headwaters of Bear Creek. Resource values are identified for the whole area, and state and Forest portions.

This long, narrow roadless area borders the west edge of the Selway-Bitterroot Wilderness in Ravalli County in west central Montana. The eastern boundary abuts private land near the valley floor or lies above roads and timber harvest at midslope. Hamilton is about 4 miles east of the area's center. Access to the boundary is provided at many points via county or Forest roads which connect with U.S. Highway 93, and State Highway 473 to the east. About 40 trails, mostly following major stream courses, provide access to the adjoining wilderness.

The 75-mile-long roadless area forms the eastern edge of the Bitterroot Mountain Range which rises sharply from the wide Bitterroot Valley. The IRA varies in width from 6 miles to less than a mile. Elevations range from 4,000 to 9,800 feet with about 33 percent of the area over 7,000 feet. The range of impressive mountain peaks at or above 8,000 feet and spectacular rugged canyons at about 4,000 feet form a scenic backdrop for travelers and 40,600 Ravalli County residents. About 30 deep, rocky, glaciated canyons break the mountain front at 1-to-3 mile intervals. These canyons are mayor access points to the Selway-Bitterroot Wilderness.

Plant and animal communities are diverse because of the topographic variation from mountain peak to valley bottom. Bedrock and rubble dominate many canyon sidewalls, steep southwest-facing slopes, and higher elevations. Forests cover most north and east slopes and riparian areas. Mayor stream riparian areas support cedar, grand fir, and an occasional white pine along with mixtures of ponderosa pine, Douglas-fir and larch. Midslopes support subalpine fir and lodgepole pine with whitebark pine or subalpine larch predominating at higher elevations. Ground cover is manly grass on steep south- to west-facing slopes; snowberry and ninebark on lower elevation relatively dry sites: willow, alder, and a rich diversity of other shrubs on moist sites; true huckleberry at midslope; and grouse whortleberry and wood rush at higher elevations.

Generally people value the area's scenery and recreation opportunities. Day hiking, fishing in streams and lakes, big-game hunting, rock climbing, crossing through to the adjacent wilderness, and ski touring are frequent uses in the canyons. Also important to the Valley is the use of water from streams for irrigation.

Of the 115,573 acres on the Bitterroot National Forest, 48,864 acres in the IRA are recommended Wilderness in the Bitterroot National Forest Plan.

Assessment of Roadless Characteristics

Natural Integrity

Effects to natural integrity include: a dozer constructed trail in Bass Creek; a small irrigation dam and reservoir at High Lake; two small abandoned irrigation dams at Kidney and Lower Camas Lakes; an old jeep trail in the South Fork of Lost Horse; reservoir drawdown on Como, Upper Twin, and Fred Burr Lakes; irrigation diversion and ditch in the headwaters of Bear Creek (Nez Perce); a dozer trail and minerals prospects in the North Fork of Trapper Creek; several trail bridges and corduroy sections across boggy sections of trail; and isolated pockets of heavy recreation use along major trails.

A road in Lost Horse Canyon is outside the roadless area boundary but does impact some of the surrounding canyon. Impacts are widely dispersed but evident to most visitors when onsite. In addition

most of the 400 acres of reservoir drawdown is around Lake Como and could easily be eliminated from any wilderness recommendations. Drift of cattle from lower elevations outside the roadless area.

A total of 40 system trails totaling 75.8 miles are within, or border, the IRA. These trails are obvious to most users

Apparent Naturalness
The impacts of human activity are confined to six canyon bottoms. However, because of the small amount of land affected, the area has a high rating for natural appearance, even in those canyons where impacts occur. Abandoned dams are at Kidney Lake and Camas Lakes, and on Bass Creek. High Lake has a dam, reservoir and cabin. Blodgett Creek pack bridge. Numerous helispots. The impacts cover less than 500 acres including reservoir drawdowns.

Opportunity for Solitude-Remoteness
Civilization appears to be close at hand from the mountain faces overlooking the Bitterroot Valley, and sights and sounds from the valley floor are evident. One can see Bitterroot Valley development, can hear traffic, and can see air pollution on certain winter days. Conversely, 30 canyon mouths offer a high degree of solitude since most are enclosed by adjacent parallel ridges which provide an effective screen from outside influences. A high degree of solitude is found within a few feet of trailheads. Outstanding opportunities away from others off trail. This feeling is enhanced by the knowledge that more than 40 miles of wilderness is ahead.

Lowest opportunity for solitude is along Lost Horse Road - a major “cherry stem” open to road traffic. Also less opportunity near Bass (dozer) Trail, Fred Burr Road and Reservoir, Blodgett Campground, Lost Horse and Como Lake.

Opportunities for solitude are limited on moderate-to-heavily used trails: Bass, Kootenai, Bear, Mill, Blodgett, Chaffin, Baker Lake, and Tin cup. Opportunities for solitude are better on moderately-used trails: Bear Overlook, Sawtooth, Trapper Cr, Nelson Lake, Watchtower and Sheephead. Opportunities for solitude are best off-trail where vegetation and topographic screening are present. Exact usage data is spotty.

Opportunity for Primitive Recreation
Ease of access and varied topography provide a wide range of opportunities. Off trail topography provides high degree of challenge and risk and contributes to vastness of scale.

Hiking, rock climbing, fishing, viewing a wide diversity of vegetation, wildlife, rock formations, avalanche chutes, waterfalls, and lakes, big- and small game hunting, and scenic cross-country opportunities are abundant. The sharp relief contributes towards the feeling of vastness. Climatic zones range from wet and cold with over 100 inches of precipitation at high elevations to dry and warm at lower elevations.

Many trails in the IRA are closed full-length to motorized use. Trails open to motorcycles are short, because they are closed at the wilderness boundary. Limited opportunities for semi-primitive motorized recreation are found on approximately 29.8 miles of the following trails: Holloway, Kootenai, St. Mary’s, Bear, Mill, Canyon and Chaffin, St Joe, Sweathouse, Gash, Bear Overlook, Bailey Lake, Camas Trail - an easy trail widened for ATVs, Ward Mountain, Boulder Peak and Sheephead. Challenge and risk is low on the creek bottom trails and generally higher on the ridge trails but it is always limited by the shortness of each trail. Monitoring indicates little to no motorcycle use in the last 20 years on most of these trails. Snowmobile opportunities in St. Mary’s, Gash, Glen, and Chaffin areas.

Opportunities are limited for motorcycle users to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale because of the short, dead-end nature of the trails in this IRA and the presence of others.

Bicycle use occurs on some trails including #614 Blue Joint, # 19 Blodgett, #142 Sheephead Creek, and #126 Bear Creek Overlook. Some trails in the recommended wilderness are closed to full-length motorized

use. Trails open to motorcycles are short, because they are closed at the wilderness boundary. No trails are open to ATVs. No loop trails exist. Limited opportunities for semi-primitive motorized recreation exist.

There are approximately 29.4 miles of system trail currently open to motorcycles on the following trails: Kootenai, Bear, Mill, Bear Overlook, Chaffin and Sheephead. Challenge and risk is low on the creek bottom trails and generally higher on the ridge trails but it is always limited by the shortness of each trail. Monitoring indicates little to no motorcycle use in the last 20 years on most of these trails. Limited snowmobile opportunities.

Special features

Special features include a natural arch in Blodgett Canyon, a massive landslide across Nelson Creek that formed Nelson Lake, waterfalls, abundant and varied rock formations, and historical evidence of irrigation dam construction around the turn of the century.

Environmental Consequences

Table 3.3- 23: Summary of miles of Open Roads and Open and Closed Motorized Trails within Selway-Bitterroot IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Selway-Bitterroot (115,573 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0.8		0.9		0.9		0.7	
Roads Open Seasonally	1.9		1.8		1.8		1.7	
Trails Closed to all Motorized	66	22.1	46.4	46.4	18.4	18.4	75.8	31.9
Open to Single-Track:								
Yearlong	9.8	9.8	29.4	29.4	57.4	57.4	0	0
Seasonal	0	0	0	0	0	0	0	0
Open to Double-Track:								
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0	0	0	0	0	0	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	0	0			0	0	0	0
Approx. Acres Open to Snowmobiles Yearlong	37,970		105,352		106,038		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	31.9		75.8		75.8		31.9	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Action Alternatives

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1

Alternative 1 excludes motorized use on 66 miles of existing motorized trails compared with **Alternative 2**, which excludes motorized use on 46.4 miles of existing motorized trails. **Alternative 1** would designate 9.8 miles open to motorized use on trails, compared to 29.4 miles open to motorized use on trails in Alternative 2. It designates 2.7 miles open to motorized use on roads, the same as in **Alternative 2**.

Along the 66 miles of routes closed to motorized use, Natural Integrity will improve to the extent that motorized-induced changes to the areas are able to recover. Apparent Naturalness will also improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 9.8 miles of trails and 2.7 miles of road designated for motorized use: **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Natural integrity** will decrease to the extent that motorized-induced changes to the area increase. The **Opportunities for Primitive Recreation Experience** will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 31.9 miles of routes, which is 43.9 miles less than **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 1**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 2

The IRA would retain motorized use on 29.4 miles of existing trails and 2.7 miles of existing open roads.

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent

Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 75.8 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3

Alternative 3 excludes motorized use on 18.4 miles of existing motorized trails compared with **Alternative 2**, which excludes motorized use on 46.4 miles of existing motorized trails

Alternative 3 designates 57.4 miles open to motorized use on trails. It retains 2.7 miles of motorized use on existing open roads.

Along the 18.4 miles of routes closed to motorized use: Natural Integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent Naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and by having more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights sounds and presence of motorized use.

Along the 57.4 miles of trails and 2.7 miles of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 75.8 miles of routes, which is the same as **Alternative 2.**

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 75.8 miles of existing motorized trail, compared to **Alternative 2,** with 46.4 miles closed to all motorized vehicles. This alternative allows motorized use on existing 2.4 miles of road, compared to 2.7 miles of roads open to motorized vehicles in **Alternative 2**.

Along the 75.8 miles of routes closed to motorized use: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of

scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 31.1 miles of routes, which is 43.9 miles less than in **Alternative 2**.

In the Selway Bitterroot IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in these areas in **Alterative 4**.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to Alternatives 1, 2, and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
37,970 acres of the Selway-Bitterroot IRA would be open to over-snow vehicle use in **Alternative 1**, which is 67,382 acres less than **Alternative 2**.

Alternative 2
105,352 acres of the Selway-Bitterroot IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
106,038 acres of the Selway-Bitterroot IRA would be open to over-snow vehicle use in **Alternative 3**, which is 686 acres more than **Alternative 2**.

Alternative 4
No acres in the Selway-Bitterroot IRA would be open to over-snow vehicle use in **Alternative 4**. This would close popular over-snow vehicle terrain in this IRA, and would substantially change the primitive recreation and solitude available to nonmotorized users as well as diminish the recreational

opportunity/experience for the motorized user. These new nonmotorized acres would result in beneficial affects to the IRA roadless characteristics of solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows

Table 3.3- 24: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

Selway-Bitterroot IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	++
Routes designated open for motorized use- Miles	9.8	29.4	57.4	0
Miles of Open Road	2.7	2.7	2.7	2.4
Trails closed to all Motorized- Miles	66	46.4	18.4	75.8
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	++
Acres open to snowmobiles	37,970	105,352	106,038	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Sapphire Roadless Area (01421)

Existing Condition

The Sapphire Roadless Area contains 0.4 mile of road open yearlong, 0.2 mile of road open seasonally, 18.6 miles of motorized trails open yearlong to single track vehicles and bikes and 4.8 miles of trails open seasonally to single track vehicles and bikes. There are 7.3 miles of motorized trails open yearlong to double track vehicles and 0.7 mile of trails open seasonally to double track vehicles. There are 43,514 acres open to snowmobiles yearlong. 51.6 miles of trails are open to mountain bikes.

Affected Environment

The Bitterroot National Forest portion of this roadless area is 43,514 acres, with the entire Sapphire Roadless Area totaling 115,699 acres. The other acres are in the Beaverhead-Deerlodge National Forest. Resource values are identified for the whole area, and state and Forest portions. The area lies along the crest of the Sapphire Mountains in Ravalli and Granite Counties of west central Montana. Hamilton and Philipsburg, county seats, are about 25 miles to the northwest and northeast respectively. The Anaconda-Pintler Wilderness borders the area to the south and the Stony Mountain and Mount Emerine roadless areas

are close to the northern boundary. Remaining lands outside the boundary have been developed for minerals and timber production.

Access is provided into many points along the boundary from State Highway 38 and from Forest roads in Rock, Copper, Moose, Martin, and Skalkaho Creeks. A network of 17 trails provides access within. The area has a north-south orientation of about 25 miles with width varying from 2 to 10 miles. Road corridors in Copper Creek and the West Fork of Rock Creek which extend towards the crest of the Sapphires reduce the width of both the northern and southern portions. Practically the entire boundary is midslope, lying above existing roads, timber harvest or mineral development.

Glacial scouring has produced steep, rocky cirque basins and trough walls along the crest and southern boundary. Remaining lands, primarily in the West and Ross Forks of Rock Creek are rolling hills with flat creek bottoms. Moraine and glacial deposits reworked by flowing water characterize most valleys east of the crest. Elevations range from 5,000 feet, at some points along the lower boundary, to 8,998 feet at Kent Peak. Sixty percent of the area is above 7,000 feet. Prominent landmarks include Bare Hill, Kent, and Congdon Peaks, and Signal Rock. The Sapphire Mountain crest divides the area into nearly equal parts. Drainages flowing to the east are Copper Creek and the Ross and West Forks of Rock Creek, a nationally recognized “blue ribbon”trout fishery. Moose, Martin, and Skalkaho Creeks flow to the west and are tributaries of the Bitterroot River. Fifteen small lakes and numerous potholes occur along the crest. Geology is primarily granite intrusions. Landforms have been modified by past alpine glaciation with soils derived from the parent geology (USDA Forest Service 1985).

Moose, Martin, and Skalkaho Creeks flow to the west and are tributaries of the Bitterroot River. Fifteen small lakes and numerous potholes occur along the crest. Geology is primarily granite intrusions. Landforms have been modified by past alpine glaciation with soils derived from the parent geology.

Streamside meadows break the forested landscape at lower elevations; exposed bedrock and rubble predominate along the Sapphire crest, Whetstone Ridge, and the southern portion bordering the Anaconda-Pintler Wilderness. Douglas-fir and lodgepole pine are the primary tree species with whitebark pine and subalpine larch at the highest elevations. Bunchgrass with scattered Douglas-fir occupies severe south- to west-facing sites. Douglas-fir is common on north exposures at lower elevations and lodgepole pine is common elsewhere. Ground cover is mainly snowberry, ninebark, and beargrass on drier sites, willow and redosier dogwood on cool moist sites, and grouse whortleberry or wood rush on severe cold sites at higher elevations.

Within the Sapphire IRA, no acres are recommended Wilderness in the Bitterroot National Forest Plan.

A large portion of this area, 37,806 acres, is a congressionally designated wilderness study area.

Assessment of Roadless Characteristics

Natural Integrity

Old mining prospects and development are found on 250 acres of patented lands. Mining operations continue at Frogpond Basin on the Sapphire crest and just outside the southern boundary near Senate Mountain. Firelines and primitive roads built during the Sleeping Child Fire are evident in the Martin Creek portion. Those firelines that were built by clearing vegetation are healing rapidly, while dozer cuts on sideslopes have permanently altered the landscape. There are approximately 9 miles of dozer line ranging in width from 15 to 100 feet.

Several roads penetrate the area, including those at Frogpond Basin; along Congdon Creek, Moose Meadows Creek, Lone Pine Ridge, Skalkaho Creek; and old firelines in Martin and Moose Creeks. Both Trout and Kent Lake dams are breached, although application has been made for reconstruction.

There is evidence of past heavy, domestic sheep use on the crest, although the area has mostly recovered and the disturbance would not be evident to most visitors. Cattle drift from Frogpond Basin and from lower elevation lands outside the area.

Recent fire suppression impacts show evidence of old helispots on some of the ridges. Popular snowmobile play areas in meadows near the Sapphire Divide. The Chain of Lakes Trail #39, a 13 mile long ATV trail runs through the IRA, and is one of the few designated ATV trails on the Forest. The trail is very popular, but is deeply rutted due to use and steepness of trail. A total of 9 system trails totaling 50.5 miles are within or border the IRA. These trails are most obvious to users.

(2009 Wilderness Institute Monitoring): 114 weed patches were recorded. The primary disturbances associated with mapped weed patches were roads (58%) and trails (34%), which is partly a reflection of sampling bias. Nonetheless, the data clearly show that weeds commonly occur in close proximity to trails and roads, and that these serve as important vectors for overall weed dissemination. (p.10) {Project File folder 'wilderness_study_areas, 'Project File document WSA-012 .pdf}.

Apparent Naturalness

This roadless area has retained a high degree of naturalness, with little evidence of man's imprint. However, on about 3 percent of the area, some impacts are evident.

Mining impacts are visible on 250 acres of patented land in the southeast – most just old holes. Old fire line in the Martin Creek is 15' to 200' wide, averages 100'. 13 miles of system trail are open to ATV use along the Chain of Lakes Trail #39 and the Bitterroot Rock Creek Divide Trail #313. There are breached dams at Kent and Trout Lake. Old fire lines in Sleeping Child Fire area. There has been recent fire suppression and there are helispots. Snowmobile "play areas" in meadows.

(From 2009 Wilderness Institute Monitoring): Evidence of developments in 2009 include: 37 bridges, 12 cairns, 7 cabins, 4 fences, 3 latrines, 1 dam, 1 water bar, 1 corral and 44 campsites. Installations and developments were distributed throughout the entire WSA. (p.28, 33, and 53). {Project File document WSA-012 .pdf}

Opportunity for Solitude-Remoteness

A core area of about 50,000 acres composed of the Ross Fork of Rock Creek, headwaters of Copper Creek south of the Copper Creek road, Moose Creek, and the headwaters of Skalkaho and Sleeping Child Creeks contain the highest potential for solitude due to good topographic boundaries, size and compactness and few off-site intrusions. This core area has outstanding opportunities away from others on weekdays except during hunting season and the best potential for visual solitude. Civilization appears close at hand near the boundary, most of which is located at midslope, above existing roads, timber harvest, or minerals development. The south end has an ATV trail and is close to timber harvest activity. Winter solitude impacted by snowmobile trail use and "play" areas.

In the south a low concentration of users can only be expected on weekdays or away from the Chain of Lakes Trail.

(2009 Wilderness Institute Monitoring): Eighteen encounters were recorded during the 2009 field season. ATV users represented 55% of all persons encountered, hiker/backpackers represented 31%, 9% were associated with UTV use and 4% were associated with motorbike use. Seven motorized noises were reported during the field season, ranging from less than 1 minute within a mile to close to 5 minutes far in the distance. Eleven visual intrusions were observed from within the study area, 82% of which were dirt roads. One highway and one clearcut were observed. (p.43, 44, and 45) {Project File document WSA-012 .pdf}.

Opportunity for Primitive Recreation

Opportunities exist for hiking, horseback riding, big and small-game hunting, fishing, and viewing a moderate diversity of vegetation, wildlife, and historic mining activity. The combination of accessible drainage bottoms, gentle ridges, and meadows provides opportunities for cross-country travel. Otherwise not a high degree of challenge and risk. Large enough to provide a range of opportunities.

There appears to be vastness of scale for the motorized user, however opportunities are limited because Trail #313, the main connector trail is closed for motorized use. This eliminates loop trip opportunities for motorcycles in the north. Throughout the area the degree of challenge and risk for motorcycle rider is provided for more by remoteness than by topography. Approximately 32 miles of system trail open to motorcycles. There are approximately 8 miles of system trail open to ATVs that access a high Lake Basin with moderate degree of challenge and risk.

Opportunities are limited for motorcycle users in the north to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale because of the short, in and out trails.

Mountain use is becoming popular along the Bitterroot/Rock Creek Divide Trail #313, Chain of Lakes Trail # 39, Railroad Creek #77, Weasel Creek #156, Jerry Lake Trail #503, and Sign Creek Trail #40.

Snowmobile opportunities limited by trail closures and terrain but some off trail opportunities above 7000 feet elevation and in the Frog Pond Basin area and Mosquito Meadows to Martin Creek areas.

(Bitterroot Quiet Use Report – 2008) While some routes historically see heavy use, others are less popular and see little to no motorized activity. No evidence of motorized use on Trails; #83Kent Lake, #102 Mosquito Meadows, #40 Sign Creek, #168 Moose Creek, #503 Skalkaho Creek–Jerry Lake, #77 Railroad Creek, #313 from Skalkaho Pass, and #156 Weasel Creek.) {Project File document WSA-029.pdf}.

(2009 Wilderness Institute Monitoring): Overall, single track trails accounted for over 86% of trails monitored. Trails with braided treads accounted for 13% and 1% of trails were double track. Evidence of motorized use was evident on less than 1% of the single track trails and on 2.2 miles of double track trails. Of the non-system trails recorded, 81% were created by foot travel, 6% by ATV use and 3% by horse travel. P.34, 35, and 38 {Project File document WSA-012 .pdf}.

Special features
Features include glacial cirques along the Sapphire Mountain crest; historic mining activity; meadows; extensive areas of whitebark pine, subalpine larch and wide panoramas from the major ridges.

Environmental Consequences

Table 3.3- 25: Summary of Miles of Open Roads and Open and Closed Motorized Trails within Sapphire IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Sapphire (43,514 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0.4		0.4		0.4		0.4	
Roads Open Seasonally	0.2		0.2		0.2		0.2	
Trails Closed to all Motorized (System Trails/OHV Roads)	40.7	40.7	20.3	20.3	8.3	8.3	51.6	3.1
Open to Single-Track:								
Yearlong	8.1	8.1	18.6	18.6	25.6	25.6	0	0
Seasonal	2.1	2.1	4.8	4.8	9.7	9.7	0	0
Open to Double-Track:								
Yearlong	0	0	7.3	7.3	7.3	7.3	0	0

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Sapphire (43,514 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Seasonal	0.7	0.7	0.7	0.7	0.7	0.7	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	0	0			0	0	0	0
Approx. Acres Open to Snowmobiles Yearlong	22,279		43,514		43,514		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	51.6		51.6		51.6		3.1	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Action Alternatives

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1
Alternative 1 excludes motorized use on 40.7 miles of existing motorized trails compared with **Alternative 2**, which excludes motorized use on 20.3 mile of existing motorized trails. **Alternative 1** would designate 10.9 miles open to motorized use on trails, compared to 31.4 miles open to motorized use on trails in **Alternative 2**. It designates 0.6 miles open to motorized use on roads, the same as in Alternative 2.

Along the 40.7 miles of routes closed to motorized use, Natural Integrity will improve to the extent that motorized-induced changes to the areas are able to recover. Apparent Naturalness will also improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 10.9 miles of trails and 0.6 mile of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that

motorized-induced changes to the area increase. The Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 51.6 miles of routes, which is the same as **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 2

The IRA would retain motorized use on 31.4 miles of existing trails and 0.6 mile of existing open roads.

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 51.6 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3

Alternative 3 excludes motorized use on 8.3 miles of existing motorized trails compared with **Alternative 2**, which excludes motorized use on 20.3 miles of existing motorized trails.

Alternative 3 designates 43.3 miles open to motorized use on trails, which is 11.9 miles more than **Alternative 2**. It retains 0.6 mile of motorized use on existing open roads, the same as **Alternative 2**.

Along the 8.3 miles of routes closed to motorized use: Natural Integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent Naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and by having more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights sounds and presence of motorized use.

Along the 43.3 miles of trails and 0.6 mile of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 51.6 miles of routes, which is the same as **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 3**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 51.6 miles of existing motorized trail, compared to 20.3 miles in Alternative 2. It allows motorized use on existing 0.6 mile of road, same as in **Alternative 2**. No routes are designated open to motorized use on trails or roads.

Along the 51.6 miles of routes closed to motorized use: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 3.1 miles of routes, which is 48.5 miles less than in **Alternative 2**.

There would be no wheeled motorized vehicle use to dispersed camping in Sapphire IRA in **Alternative 4** on the Forest.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to Alternatives 1, 2, and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with “modern” civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
22,279 acres of the Sapphire IRA would be open to over-snow vehicle use in **Alternative 1**, which is 21,235 acres less than **Alternative 2**.

Alternative 2
43,514 acres of the Sapphire IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
43,514 acres of the Sapphire IRA would be open to over-snow vehicle use in **Alternative 3**, which is the same as **Alternative 2**.

Alternative 4
No acres of the Sapphire IRA would be open to over-snow vehicle use in **Alternative 4**. This would close popular snowmobile terrain in this IRA, and would substantially change the primitive recreation and solitude available to nonmotorized users, as well as diminish the recreational opportunity/experience for the motorized user. These new nonmotorized acres would result in beneficial affects to the IRA characteristics of solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows:

Table 3.3- 26: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

Sapphire IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	++
Routes designated open for motorized use- Miles	10.9	31.4	43.3	0
Miles of Open Road	0.6	0.6	0.6	0.6
Trails closed to all Motorized- Miles	40.7	20.3	8.3	51.6
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	++
Acres open to snowmobiles	22,279	43,514	43,514	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Lolo Creek Roadless Area (01805)

Existing Condition

The Lolo Creek Roadless Area contains no roads or trails open to motorized vehicles. The entire IRA is open to snowmobiles yearlong. No trails are open to mountain bikes. There are no miles of unauthorized routes that are authorized.

Affected Environment

The Bitterroot National Forest portion of this roadless area is 577 acres, with the entire Lolo Creek Roadless Area totaling 14,895 acres. The other acres are in the Lolo and the Clearwater National Forests.

This roadless area lies 15 miles southwest of Missoula, 17 miles northwest of Stevensville, and 6 miles west of Lolo. State Highway 12 parallels the northern border at a distance of about 2 miles. From it, logging roads along Mill Creek, Cedar Creek and Dick Creek approach the northern and western margins. A road up Mormon Creek provides vehicle access to the eastern edge. Four system trails totaling 12 miles extend into and across this area.

The original RARE II Inventory included 17,087 gross and 15,587 net acres. Road construction has reduced this area by 240 acres.

The Lolo Creek study area is situated immediately adjacent to the Selway-Bitterroot Wilderness Area on the north. The most prominent feature is the lower valley of the South Fork of Lolo Creek which rises on the east to the summit of Lolo Peak, a difference of about 4,500 vertical feet. Most of the streams flow to the north into Lolo Creek, and the slopes are heavily timbered. Lolo Peak and Rocky Point peaks are not timbered because of rocky, shallow soils.

Most of the area is in the subalpine fir habitat series with a variety of understories. There are also small amounts of the Douglas-fir habitat types. These occur between 4,500 and 7,000 feet elevation. Most of this area is classified as commercial timber land.

The area lies within the border zone along the contact between the Precambrian Belt Supergroup and the granitics of the Idaho Batholith. Granite, mica schists, and gneisses are exposed over most of the area. To the north, altered Belt Group rocks are found.

The Lolo Creek Roadless Area provides habitat for a variety of game and nongame wildlife species commonly found in western Montana including pileated woodpecker, pine marten, mountain goat and hoary marmot and other fur bearers. Visitors can often view deer and elk herds on summer range in the area.

Currently, popular recreational activities include hiking and trail biking, horseback riding, fishing, big-game hunting; and in winter, cross-country skiing, and winter mountaineering sports activities.

The Lolo Creek IRA, Bitterroot National Forest portions, is not recommended for wilderness designation in the Bitterroot National Forest Plan.

Assessment of Roadless Characteristics

Natural Integrity

The bulk of the area is in the subalpine fir habitat series with understories of smooth woodrush, beargrass, menziesia, beadlily, bedstraw, bluejoint, and twinflower. About 20 percent is in the Douglas-fir habitat series with understories of ninebark, blue huckleberry, twinflower, and pinegrass. The rest of the area is spruce/twinflower and scree. Blister rust-killed whitebark pine dominate the north ridge.

Ecological processes and the natural landscape in parts of the area have been disrupted to a certain extent by past and present domestic grazing. Basically, vegetative communities in the unit are similar to those found in surrounding areas outside the roadless boundary.

The area also contains a significant fisheries. Air and water quality in the area are considered good.

Apparent Naturalness

The Lolo Creek IRA is significant because of its proximity to the Selway-Bitterroot Wilderness Area. Possible conflicts include a proposed ski area, potential for electronic site development, and possible mineral development. The Ward Lode Mine was located on the Lolo National Forest to the west and several of the claims were staked in the roadless area. This mining claim site and access road has been reclaimed and is natural appearing.

An irrigation dam is located on Carlton Lake and impounds natural flows. The Carlton Ridge Primitive Road provides access to the dam. This dozer bladed road of approximately one mile, built by irrigators in the 1940's, has recently been improved. Reconstruction is planned for the dam. View of the dam, reservoir drawdown and large borrow pits near the reservoir dominate the view while passing by Carlton Lake. Hikers follow the road to get to Lolo Peak.

A small ski run has been cut out by users along a portion of Lolo Peak Trail No.1312. Several clearcuts and logging roads are visible outside the area. Fort Fizzle National Historic Site is located about 3 to 4 miles to the north near Lolo Creek.

Opportunity for Solitude-Remoteness

Because viewpoints from within the IRA include vistas of Missoula, Lolo and Florence, there are too many off-site intrusions for the area to provide any real inspirational value or sense of solitude. A major impact is the location of the area and its proximity to population centers. There is not an outstanding opportunity for solitude due to moderate to heavy visitation, frequent air traffic, and noise from highways. Portions of Highways 93 South and 12, lookouts, and ranch buildings impact the appearance of the area. A 500 kV twin powerline constructed by the Bonneville Power Administration is visible from the area.

Opportunity for Primitive Recreation

Primitive recreation opportunities are very good due to steepness of terrain, rock cliffs, and proximity to the Selway-Bitterroot Wilderness. Topography on Lolo Peak provides challenge and risk. The larger area of the IRA on the Lolo National Forest provides for challenge and risk while using outdoor skills. Good terrain exists for "expert" skiers. Currently, popular recreational activities include hiking and trail biking, horseback riding, fishing, big-game hunting; and in winter, cross-country skiing and winter mountaineering sports activities. There are 0 miles of system road and trail within the IRA on the Bitterroot National Forest, providing excellent opportunities for a primitive recreation experience.

Special features

A few old miners' cabins exist inside the area. There is an old lookout base on Lantern Ridge. These are not, however, significant historical sites. No prehistoric sites have been identified. A portion of the roadless area was evaluated in a ski area feasibility study made by the Forest Service during the mid and late 1960's. Results of the study suggested the area had some potential and periodically Interest is expressed by private individuals.

All but the northeast corner of the 920 acre Carlton Ridge Research Natural Area is located within the roadless area. The principle feature of the area is an extensive grove of alpine larch on well-developed soils. In addition, alpine larch and western larch are found at the same elevation which is uncommon. Studies indicate that hybridization between the two species has occurred on the site. This is one of the few areas known where this occurs. Grizzly bears occupied the area in the historic past, but no bears have been sighted in many years.

Environmental Consequences

Table 3.3- 27: Summary of miles of Open Roads and Open and Closed Motorized Trails within the Lolo Creek IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Lolo Creek (577 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0		0		0		0	
Roads Open Seasonally	0		0		0		0	
Trails Closed to all Motorized (System Trails/OHV Roads)	0	0	0	0	0	0	0	0
Open to Single-Track:								
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0	0	0	0	0	0	0	0
Open to Double-Track:								
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0	0	0	0	0	0	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	0	0			0	0	0	0
Approx. Acres Open to Snowmobiles Yearlong	0		577		577		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	0.0		0.0		0.0		0.0	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Action Alternatives

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1
In **Alternative 1**, no roads or trails are open to motorized travel, which is the same as **Alternative 2**. Because no routes are currently open to motorized use, Natural Integrity will improve to the extent that natural changes will occur. Apparent Naturalness will also improve to the extent that natural changes will occur. Opportunities for Primitive Recreation Experience will remain very good due to steepness of terrain, rock cliffs, and proximity to the Selway-Bitterroot Wilderness in an area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will remain the same as **Alternative 2**, with isolation from the immediate sights, sounds, and presence of motorized use.

Mountain bike travel would not be allowed on any routes, which is the same as **Alternative 2**.

In the Lolo IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 1**.

Alternative 2
In **Alternative 2** no roads or trails are open to motorized travel.

Because no routes are currently open to motorized use, Natural Integrity will improve to the extent that natural changes will occur. Apparent Naturalness will also improve to the extent that natural changes will occur. Opportunities for Primitive Recreation Experience will remain very good due to steepness of terrain, rock cliffs, and proximity to the Selway-Bitterroot Wilderness in an area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will include isolation from the immediate sights, sounds, and presence of motorized use.

Mountain bike travel is not allowed on any routes.

In the Lolo IRA, there are no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 2**.

Alternative 3 In **Alternative 3**, no roads or trails are open to motorized travel, which is the same as Alternative 2. Because no routes are currently open to motorized use, Natural Integrity will improve to the extent that natural changes will occur. Apparent Naturalness will also improve to the extent that natural changes will occur. Opportunities for Primitive Recreation Experience will remain very good due to steepness of terrain, rock cliffs, and proximity to the Selway-Bitterroot Wilderness in an area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will remain the same as Alternative 2, with isolation from the immediate sights, sounds, and presence of motorized use.

Mountain bike travel would not be allowed on any routes, which is the same as **Alternative 2**.

In the Lolo IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 3**.

Alternative 4
In **Alternative 4** no roads or trails are open to motorized travel, which is the same as **Alternative 2**.

Because no routes are currently open to motorized use, Natural Integrity will improve to the extent that natural changes will occur. Apparent Naturalness will also improve to the extent that natural changes will occur. Opportunities for Primitive Recreation Experience will remain very good due to steepness of terrain, rock cliffs, and proximity to the Selway-Bitterroot Wilderness in an area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will remain the same as **Alternative 2**, with isolation from the immediate sights, sounds, and presence of motorized use.

Mountain bike travel would not be allowed on any routes, which is the same as **Alternative 2**.

In the Lolo IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 4**.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to Alternatives 2 and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
No acres of the Lolo Creek IRA would be open to over-snow vehicle use in **Alternative 1**, which is 577 acres less than in **Alternative 2**. This would close over-snow vehicle terrain in this IRA, though due to its small size, it has not been a popular destination. These new nonmotorized acres would result in beneficial affects to the roadless characteristics of solitude and primitive recreation.

Alternative 2
577 acres of the Lolo Creek IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
577 acres of the Lolo Creek IRA would be open to over-snow vehicle use in **Alternative 3**, which is the same as **Alternative 2**.

Alternative 4
No acres of the Lolo Creek IRA would be open to snowmobiling in **Alternative 4**, which is 577 acres less than in **Alternative 2**. This would close snowmobile terrain in this IRA, though due to its small size, it has not been a popular destination. These new non-motorized acres would result in beneficial affects to the IRA characteristics of attributes of solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows.

Table 3.3- 28: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

Lolo IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	++	++	++	++
Routes designated open for motorized use- Miles	0	0	0	0
Miles of Open Road	0	0	0	0
Trails closed to all Motorized- Miles	0	0	0	0
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, , Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	++	- -	- -	++
Acres open to snowmobiles	0	577	577	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Stony Mountain Roadless Area (01808)

Existing Condition

The Stony Mountain Roadless Area contains 0.8 mile of road open yearlong, 43.8 miles of motorized trails open yearlong to single track vehicles and bikes, 4 miles of motorized trail open to double track, 38,146 acres are open yearlong to snowmobiles and 5,605 acres are open seasonally to snowmobiles. 59.3 miles of trails are open to mountain bikes.

Affected Environment

Portions of this 103,346 acre IRA are in three national forests, with the greatest acreage on the Bitterroot National Forest: 44,082 acres. The areas on the Lolo and Deerlodge National Forests account for the remainder.

The area lies along the crest of the Sapphire Mountains in Ravalli and Granite Counties of west central Montana. The Welcome Creek Wilderness lies several miles to the north, and the Quigg Peak and Sapphire roadless areas are immediately adjacent to the east and south. Remaining lands adjacent to the boundary have been developed for minerals, timber production, agriculture, or recreation.

The area is about 25 miles south of Missoula and equidistant between Hamilton and Philipsburg. Access is provided at many points along the boundary by Montana State Highway 38 and from Forest roads in Rock, Burnt Fork, Willow, and Gird Creeks. A network of about 20 trails provides access within the area along

most major drainages and ridgetops. The Palisade Mountain and Easthouse National Recreation Trails occur in the area.

The area extends 18 miles along the Sapphire Mountain crest, the area's dominant feature, which bisects the area. Width averages about 10 miles, however, a roaded intrusion in Signal Creek pinches the central section to about 6 miles. About 20 percent of the boundary is topographically well-defined by ridgetops or stream bottoms. The remaining boundary is midslope lying above or below existing roads or timber harvest and minerals development.

Elevations range from 5,000 feet along the boundary to 8,700 feet at Dome Shaped Mountain, with about 40 percent of the area above 7,000 feet. Drainage headwaters adjacent to the crest, breaklands above major streams, and most of the northern half of the area are extremely rocky, including the entire Burnt Fork, Flat Rock, Upper Willow drainages, and from Eagle Creek to the north boundary on the Rock Creek side.

Several large natural meadows break the landscape in the Skalkaho Basin near the south boundary. Most of the remaining area is forested with Douglas-fir and lodgepole pine. Higher ridges are predominantly whitebark pine and stream bottoms contain Engelmann spruce. Ground cover is mainly grass on severe south and west-facing exposures; snowberry, ninebark, and beargrass on drier sites: willow, redosier dogwood, and menzesia on cool, moist sites; and grouse whortleberry or woodrush on severe sites above 7,000 feet. A diversity of native grasses and forbs comprise the meadow vegetation in Skalkaho Basin and Upper Burnt Fork.

Slopes are steep throughout, with the exception of about 10,000 acres of gently rolling land between Wyman and Eagle Creeks.

Geology and soils are complex. Granitic intrusives are found in the Eagle/Wyman Creek area, limestones in Gold/Willow Creek, glacial deposits in upper Burnt Fork, and a variety of more resistant argillites and quartzites elsewhere. Preliminary geologic mapping indicates the presence of numerous faults.

Five small lakes and numerous potholes dot the southern portion of the area. Better known streams are Burnt Fork, Daly, and Willow Creeks all flowing west into the Bitterroot River and Stony, Wyman, Eagle, Hutsinpilar, and Alder Creeks flowing east into Rock Creek.

This area is not recommended for wilderness designation in the Forest Plan.

Assessment of Roadless Characteristics

Natural Integrity

Activities that have significantly altered natural processes are minimal and generally confined to old minerals prospects. There is exploration and some placer work near the boundary in Gold, Wyman, and Stony Creeks, and Skalkaho Mountain. The dam at Burnt Fork Lake alters stream flow. The remainder of the area appears natural.

Apparent Naturalness

An old flume, ditches, and deteriorated cabins are associated with placer mining operations in Stony Creek. The above impacts cover an insignificant acreage, are widely dispersed, historical in nature (50 years or older), with recovery nearly complete. The only significant current impact is a Jeep trail leading to a cabin and mineral prospect in the headwaters of Gold Creek. This cabin was removed in 2010. The trail is approximately 2 l/2 miles long. Minor portions have been graded to accommodate Jeep travel.

There is also a dozer trail along the Sapphire Crest from the north boundary to Eagle Point and then east for about 1 mile. This dozer line on Trail #313 from Sawmill Saddle to Eagle Point was built in 1970s to access mining on Lolo side.

Most of the old minerals activity would not be apparent to most visitors. The most extensive workings are readily apparent when onsite: however they are historical and not objectionable.

A total of 11 system trails totaling 59.3miles are within, or border, the IRA. These trails are obvious to most users

ATV incursions first 200' of Cutoff Gulch Trail #147. Dozer line to the back of Burnt Fork Lake from Road #1352. ATV use along this route to the ridge above Burnt Fork Lake.

Helispots are evident but vegetation is recovering.

(Bitterroot Quiet Use Report – 2008) Monitoring by a hiker along many of the major trails in the Stony Mountain IRA in 2008 noted no evidence of motorized use along these trails; South Fk. Lolo Trail #311, Flat Rock Ck. Tr. # 148, Burnt Fork #321 and Bitterroot Big Springs #147 {Project File document WSA-029.pdf}.

Opportunity for Solitude-Remoteness

The area is moderately well-screened from civilization and development by topography and its relatively large and compact size. However, about 20 percent of the area has boundaries at midslope either above or below existing development where civilization appears close at hand. The core of the area-Hutsinpilar, Eagle, and Wyman Creeks-plus the headwaters of other major drainages such as Stony, Willow, Daly, and the Burnt Fork, are well-protected by topography with good opportunities for solitude. This portion constitutes about 50 percent of the area. Opportunities for solitude are moderate in the rest of the area where roads intrude into the lower portions of drainages such as Williams Gulch and the Burnt Fork. Outstanding opportunities away from others on or off trail except during hunting season. Relatively large size and light use contribute to opportunity for solitude.

Opportunity for Primitive Recreation

Stony Mountain IRA is large enough to provide isolation and vastness of scale. Extensive trail system with large blocks of land without trails. Recreation opportunities include hiking, horseback riding, big- and small-game hunting, fishing, viewing a moderate diversity of vegetation, wildlife, geology, and historic mining activity. The combination of accessible drainage bottoms, gentle ridges, and open parklike meadows provides opportunities for cross-country travel.

There appears to be vastness of scale for the motorized user, however opportunities are limited because Trail #313, the main connector trail is closed for motorized use from Trail #39 to Skalkaho Pass. Open trails are often steep and have a moderate to high degree of challenge and risk. Opportunities exist for motorcycle users to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale.

Snowmobile opportunities are limited by trail closures and topography.

Special Features

The 25,000-acre Skalkaho Game Preserve offers visitors the opportunity to view and photograph elk, goats, and other wildlife m their natural environment. Unique features are the massive rock rubble slopes of Boulder Basin; glacial cirques along the Sapphire Mountain crest; historical evidence of mining activity; the large natural meadows in Skalkaho Basin; extensive areas of whitebark pine, alpine larch; and wide panoramas from the major ridges.

Environmental Consequences

Table 3.3- 29: Summary of miles of Open Roads and Open and Closed Motorized Trails within the Stony Mountain IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Stony Mountain (44,082 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	.13		.8		0.13		0.13	
Roads Open Seasonally	0		0		0.7		0	
Trails Closed to all Motorized	59.3	59.3	11.5	11.5	6.5	6.5	59.3	59.3
Open to Single-Track:								
Yearlong	0	0	43.8	43.8	10.8	10.8	0	0
Seasonal	0	0	0	0	42.4	42.4	0	0
Open to Double-Track:								
Yearlong	0	0	2.2	2.2	0	0	0	0
Seasonal	0	0	1.8	1.8	0	0	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	0	0			1/0.4	0.4	0	0
Approx. Acres Open to Snowmobiles Yearlong/Seasonally	9,847/1,911		38,146/5,605		38,146/5,605		0/1,911	
Trails open to Mountain Bikes (System Trails/OHV Roads)	59.3		59.3		59.7		59.3	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Action Alternatives

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued

use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1

Alternative 1 excludes motorized use on 59.3 miles of existing motorized trails compared with **Alternative 2**, which excludes motorized use on 11.5 miles of existing motorized trails. **Alternative 1** would designate no miles open to motorized use on trails, compared to 47.8 miles open to motorized use on trails in **Alternative 2**. It designates 0.13 mile open to motorized use on roads, 0.67 mile less than in **Alternative 2**.

Along the 53.6 miles of routes closed to motorized use, **Natural Integrity** will improve to the extent that motorized-induced changes to the areas are able to recover. **Apparent Naturalness** will also improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for Primitive Recreation Experience** will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 0.13 mile of road designated for motorized use: **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Natural integrity** will decrease to the extent that motorized-induced changes to the area increase. The **Opportunities for Primitive Recreation Experience** will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 59.3 miles of routes, which is the same as **Alternative 2**.

In the Stony Mountain IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 1.**

Alternative 2

Alternative 2 retains motorized use on 47.8 miles of existing trails and 0.8 mile of existing open roads. **Alternative 2** excludes motorized use on 11.5 miles of existing motorized trails.

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 59.3 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3

Alternative 3 excludes motorized use on 6.5 miles of existing motorized trails compared with **Alternative 2**, which excludes motorized use on 11.5 miles of existing motorized trails

Alternative 3 designates 53.6 miles open to motorized use on trails. 0.4 miles of these are unauthorized trails authorized in **Alternative 3**. It retains 0.83 mile of motorized use on existing open roads.

Along the 6.5 miles of routes closed to motorized use: Natural Integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent Naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and by having more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights sounds and presence of motorized use.

Along the 53.6 miles of trails and 0.83 mile of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 59.7 miles of routes, which is 0.4 mile more than **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 3**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 59.3 miles of existing motorized trail, compared to **Alternative 2** with 11.5 miles closed to motorized trails. This alternative allows motorized use on existing 0.13 mile of road, compared to 0.8 mile of roads open to motorized vehicles in **Alternative 2**.

Along the 59.3 miles of routes closed to motorized use: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Along the 0.13 mile of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 59.3 miles of routes, which is the same as **Alternative 2**.

In the Stony Mountain IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 4.**

Over-Snow

Designating areas open to over-snow vehicle use may affect recreational experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to All Alternatives

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
11,758 acres of the Stony Mountain IRA would be open to over-snow vehicle use in **Alternative 1**, which is 31,993 acres less than **Alternative 2**.

Alternative 2
43,751 acres of the Stony Mountain IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
43,751 acres of the Stony Mountain IRA would be open to over-snow vehicle use in Alternative 3, which is the same as Alternative 2.

Alternative 4
1,911 acres of the Stony Mountain IRA would be open to over-snow vehicle use in **Alternative 4**. This would close 41,840 acres of popular over-snow vehicle terrain in this IRA, and would substantially change the primitive recreation and solitude available to nonmotorized users as well as diminish the recreational opportunity/experience for the motorized user. These new non-motorized acres would result in beneficial affects to the IRA characteristics of solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows:

Table 3.3- 30: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristic

Stony Mountain IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	++	- -	- -	++
Routes designated open for motorized use- Miles	0	47.8	53.6	0
Miles of Open Road	0.13	0.8	0.83	0.13
Trails closed to all Motorized- Miles	59.3	11.5	6.5	59.3
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, , Apparent Naturalness Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	-
Acres open to snowmobiles	11,758	43,751	43,751	1,911

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Blue Joint Roadless Area (01941)

Existing Condition:

The Blue Joint Roadless Area contains 3.5 miles of road open yearlong, 1 mile of road open seasonally and 61.5 miles of motorized routes open yearlong to single track vehicles. 62,569 acres are open to snowmobiles yearlong. 61.5 miles of trails are open to mountain bikes.

Affected Environment

The Bitterroot Forest portion of this roadless area is 64,839 acres, with the entire Blue Joint Roadless Area totaling 65,329 acres. The other acres are in the Salmon National Forest. About 99% of the roadless area is in Montana and about 1% is in Idaho. Resource values are identified for the whole area, and state and Forest portions. The Blue Joint Roadless Area is located in the southern end of Ravalli County in western Montana and the northern portion of Lemhi County in east central Idaho. It lies approximately 45 miles south of Hamilton, Montana, and 40 miles north of Salmon, Idaho.

Blue Joint is a triangular-shaped area running 13 miles north and south and ranging in width from 4 to 13 miles. The west side borders the Frank Church-River of No Return Wilderness in Idaho for about 17 miles. The rest of the area is defined by roads; primarily the West Fork Road and extensions from it. The Nez Perce Road defines the northern boundary separating this area from the adjacent Selway-Bitterroot

Wilderness and contiguous roadless lands. Likewise, the Reynolds Lake Road defines the southern boundary, separating the area from that portion of the Frank Church-River of No Return Wilderness in the headwaters of Reynolds Creek. Seventy-five percent of the boundary is well-defined by topographic features such as ridgetops or streams, and the remainder is at midslope above roads and/or timber harvest.

Elevations range from 4,900 to 8,600 feet. The area is generally a high, mountainous region with 50 percent of the area over 7,000 feet. Razorback Ridge and Razorback Mountain, at 8,637 feet elevation, are dominant features, and divide the area into northwest and southeast portions. Blue Joint Creek, by far the largest stream, drains the northwestern segment; and Chicken, Deer, and West Creeks drain the southeast. Stream bottoms are generally narrow with sideslopes rising steeply to narrow ridges. Slopes on more than one-half of the area are in excess of 60 percent, thereby confining most use to stream bottoms or ridgetops.

The area is forested except for the unique large meadows in the headwaters of Deer and Blue Joints Creeks and dry, south-facing slopes. At higher elevations rock rubble and grassy balds are common. Tree species are predominantly Douglas-fir and ponderosa pine on the warmer, lower elevation sites and lodgepole pine on cooler sites at midslope. Near the top of the higher ridges, whitebark pine is a dominant species. Ground cover is primarily pine grass, snowberry, and ninebark at lower elevations and beargrass or grouse whortleberry on higher, cooler sites.

In the Blue Joint drainage, forest fires in the late 1800's burned over most of the area. Today, small lodgepole pine stands cover this portion contrasting with the rest of the area. In 2000, high and moderate severity wildfire burned much of the Chicken, West, Coal, and Little Blue drainages.

Within the Blue Joint IRA, 27,501 acres are recommended Wilderness in the Bitterroot National Forest Plan.

Most of this area, 64,168 acres, is a congressionally designated wilderness study area

Assessment of Roadless Characteristics

Natural Integrity

Activities that have significantly altered natural processes are minimal and located just inside the eastern and southeastern boundaries[7]. These include all or portions of seven timber cutting units from the late 1960's and 1970's totaling about 190[8] acres and 3 miles of associated access roads. The fires of 2000 burned over the plantations and roads in the Coal Creek area. The effect was to wash out much of the residual effects of the past cutting units, but at the same time opened and re-exposed roadbeds which were otherwise brushing over. The boundary could be defined to exclude these impacts.

There is a 3/4-mile fire road in the extreme headwaters of Blue Joint Creek, constructed in 1962[9]. This was passable by full size vehicles in 1977, but has since been allowed to become impassable by the growth of trees and brush in the roadbed.

About 1 mile of dozer constructed trail in lower Blue Joint Creek which also serves as the trail tread for Trail 614. Full size vehicles could use this segment in 1977. It has since been allowed to brush in to standard ATV width, physically restricting full size vehicle use.

These impacts are readily apparent to any visitor when onsite; however, the remainder of the area appears natural. The roads have altered natural processes, but cutting units will continue to recover to nearly natural conditions over time.

Other, more minor non-conforming developments existed or exist in the area. The Deer Creek Range Allotment was terminated in 1990, reducing authorized grazing and associated. Old outfitter corals, hitch

[7] 1977 RARE II WARS rating sheet and supporting maps

[8] Original report says 170 acres. The current data lists these same stands as 190 acres total.

[9] Listed as road 044 on the 1977 travel map.

racks, and pit toilets at Blue Joint Meadows have been removed. Most of the abandoned telephone line on Razorback Ridge has been removed. The Deer Creek irrigation ditch in northwest section 9 was converted to a buried pipeline and revegetated.

In 1977 there were 15 mining claims. Three 1.75" exploratory holed were drilled in 1992, holes were plugged and Pagus Gold Corp. dropped their lease on the mineral claims.

Large fires in the 1870s, 1880s, 1910, 1930s, 1940s, 1960s and 1970s became generally progressively smaller in later decades. Large fires in 1990s and 2000. Policy is now in place to allow fire to play a more natural role in this portion of the IRA.

Similarly, all fire suppression strategies now consider the use of Minimum Impact Management Tactics. These were used in containing the Little Blue fire in 2000, reducing the overall impacts of actual fire suppression tactics from what would likely have occurred in fighting this fire in earlier years.

Fire related effects include high, moderate and low severity burn and associated mortality in Little Blue Joint, Coal West, and Chicken Creek drainages, debris slide in Chicken Creek, large reduction I fish populations in Chicken and Little Blue Joint Creeks (presumably short term) – 2001 FP monitoring report.

(2009 Wilderness Institute Monitoring): Seventy-three infestations containing seven know noxious weed species and covering more than 70 acres were reported. The primary disturbances with mapped weed patches were associated with trails (74%), but also associated with burned acres (68%), which is partly a reflection of sampling bias. Nonetheless, the data clearly show that weeds commonly occur in close proximity to trails, and areas of disturbance and that these serve as important vectors for overall weed dissemination, (p.16) {Project File document WSA-011.pdf}.

Apparent Naturalness

The impacts of timber sale cutting units just inside the eastern and southeastern boundaries, the fire road and dozer trail in the Blue joint drainage are readily apparent to any visitor when onsite, but are recovering. The grazing impacts may be visible. However, the remainder of the area appears natural. The roads have permanently altered natural processes, but cutting units will recover to nearly natural conditions in 20-30 years.

A total of 8 system trails totaling 61.5 miles are within, or border, the IRA. These trails are obvious to most users. The Blue Joint Trail commonly gets motorcycle use and has become popular with mountain bike riders. Other trails popular with mountain bike riders are Jack the Ripper #137, Razorback Ridge #106, Deer Creek # 139 and Little Blue Joint # 223.

No trails are open to ATVs. Snowmobile use is in the eastern half of the area. Trails totaling 61.5 miles are within, or border, the IRA. These trails are obvious to most users.

The Deer Creek irrigation ditch in NW Sec. 9 was converted to a buried pipeline and revegetated. One mile of primitive road has been allowed to grow in, physically eliminating motorized use. 0.5 mile road width trail has been allowed to grow in, physically restricting motorized use from full sized vehicles (1977) to ATV width today. Total motorized road and trail use reduced by approximately 18 miles since 1977.

(From 2009 Wilderness Institute Monitoring): Evidence of developments in 2009 included 23 water bars, 7 cairns, 5 bridges, 2 water diversions, 2 lookouts, 1 cabin, and 1 corral. Twenty-two signs were also observed {Project File document WSA-011.pdf}.

Opportunity for Solitude-Remoteness

Opportunities to experience isolation from sights of development are best in the west and are somewhat lower in the southeast. Civilization appears closer at hand along the northern and eastern boundaries.

The northwest portion of the area is entirely enclosed by high ridges and provides outstanding solitude. This feeling is enhanced by the many miles of wilderness to the west and south. No development can be seen or heard.

Solitude is somewhat less in the southeast portion. About 2 miles of road in Deer Creek, outside the area, form a roaded intrusion into the headwaters of that drainage. Distant views include roads and timber sale activity just outside the area.

Civilization appears close at hand along the northern and eastern boundaries and from that portion within Woods Creek.

Overall, about 40 percent of the area continues to provide outstanding opportunities for solitude, another 40 percent provides high to moderate opportunities, and 20 percent provides low opportunities (USDA Forest Service 1987b, Appendix C).

Trails may have motorcycle tracks. Exact usage data is not available. Use increases during bow and rifle season.

About 40 percent of the area provides outstanding opportunities for solitude, another 40 percent provides high to moderate opportunities and 20 percent provides low opportunities.

(Bitterroot Quiet Use Report – 2008): Monitoring in 2008 of Trails #138 and #139, found no evidence of any motor vehicles accessing these trails {Project File document WSA-029.pdf}.

(2009 Wilderness Institute Monitoring): Three separate groups were encountered with two people each (two mountain bikers and 4 hikers/backpackers) {Project File document WSA-011.pdf}.

Opportunity for Primitive Recreation

The size of the area provides for challenge and risk while using outdoor skills with recreation opportunities which include hiking, big- and small-game hunting, fishing, and viewing a moderate diversity of vegetation and wildlife. Current use is very light consisting primarily of big-game hunting but also includes day hiking, wildlife viewing, horseback riding, camping, and fishing. Major attractions include trails and campsites along the several larger streams and meadows. The State Line and Razorback Ridge Trails provide varied alpine scenery near the crests.

Opportunities exist for motorcycle users to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale.

(2009 Wilderness Institute Monitoring): Ninety-three percent of the trails were single-track width. Nineteen non-system trails were identified. Most (68%) were new routes created by recreational use (type of use unclear but one route appeared to be created by an ATV and eight appeared to be created by foot travel {Project File document WSA-011.pdf}.

Special features

Significant scenic attractions include two prominent landmarks, meadows in the upper reaches of Blue Joint and Deer Creeks, and wide panoramas viewed from the major divides. The landmarks are Castle Rock, the remnant of a volcanic plug, and a natural rock arch east of the confluence of Jack the Ripper and Blue Joint Creeks. Parts of the Southern Nez Perce Indian Trail traverse the Montana/Idaho ridge and Bare Cone Lookout is in the northern portion of the area. Several archeological sites are associated with the trail.

Environmental Consequences

Table 3.3- 31: Summary of miles of Open Roads and Open and Closed Motorized Trails within Blue Joint IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Blue Joint (64,839 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0.3		3.5		3.5		0	
Roads Open Seasonally	1.0		1.0		1.0		1.0	
Trails Closed to all Motorized (System Trails/OHV Roads)	24.6	2.6	0	0	0	0	61.5	0
Open to Single-Track:								
Yearlong	36.9	36.9	61.5	61.5	57.2	57.2	0	0
Seasonal	0	0	0	0	4.3	4.3	0	0
Open to Double-Track:								
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0	0	0	0	0	0	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	0	0			0	0	0	0
Approx. Acres Open to Snowmobiles Yearlong	4,957		62,569		62,569		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	39.5		61.5		61.5		0	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Action Alternatives

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued

use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1

Alternative 1 excludes motorized use on 24.6 miles of existing motorized trails compared with **Alternative 2**, which does not exclude motorized use on existing motorized trails. **Alternative 1** would designate 36.9 miles open to motorized use on trails, compared to 61.5 miles open to motorized use on trails in **Alternative 2**. It designates 1.3 miles open to motorized use on roads, compared to 4.5 miles open in **Alternative 2**.

Along the 24.6 miles of routes closed to motorized use, Natural Integrity will improve to the extent that motorized-induced changes to the areas are able to recover. Apparent Naturalness will also improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 36.9 miles of trails and 1.3 miles of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. The Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 39.5 miles of routes, which is 22 miles less than in **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 1**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 2

The IRA would retain motorized use on 61.5 miles of existing trails and 4.5 miles of existing open roads.

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 61.5 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including

inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3

Alternative 3 would retain motorized use on 61.5 miles of existing trails and 4.5 miles of existing open roads, which is similar to **Alternative 2**.

In **Alternative 3**, similar to **Alternative 2**, as long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

Along the 61.5 miles of trails and 4.5 miles of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 61.5 miles of routes, which is the same as in **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 3**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 61.5 miles of existing motorized trail, all of which are open to motorized use in **Alternative 2**. **Alternative 4** allows motorized use on 1.0 mile of road, compared to 4.5 miles of road open to motorized use in **Alternative 2**.

Along the 61.5 miles of routes closed to motorized use: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would not be allowed on any trails or roads, which is 61.5 miles less than in **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 4**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Over-snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of IRAs open to over-snow use and effects to roadless characteristics

Effects Common to Alternatives 1, 2, and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
4,957 acres of Blue Joint IRA would be open to over-snow vehicle use in **Alternative 1**, which is 57,612 acres less than in **Alternative 2**.

Alternative 2
62,569 acres of the Blue Joint IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
62,569 acres of Blue Joint Mountain IRA would be open to over-snow vehicle use in **Alternative 3**, which is the same as **Alternative 2**.

Alternative 4
No acres of the Blue Joint IRA would be open to over-snow vehicle use in **Alternative 4**. This would close popular snowmobile terrain in this IRA, and would substantially change the primitive recreation and solitude available to nonmotorized users, as well as diminish the recreational opportunity/experience for the motorized user. These new nonmotorized acres would result in beneficial affects to the IRA roadless characteristics of solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows.

Table 3.3- 32***: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics***

Blue Joint IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	++
Routes designated open for motorized use- Miles	36.9	61.5	61.5	0
Miles of Open Road	1.3	4.5	4.5	1.0
Trails closed to all Motorized- Miles	24.6	0	0	61.5
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, , Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	++
Acres open to snowmobiles	4,957	62,569	62,569	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Allan Mountain Roadless Area (01946)

The Allan Mountain Roadless Area contains 0.1 mile of road open yearlong, 0.2 mile of road open seasonally. 47.1 miles of motorized routes open yearlong to single track vehicles, and 35.3 miles of motorized routes are open seasonally to single track vehicles. 0.4 mile of motorized routes are open yearlong to double track vehicles, and 9.75 miles of motorized routes are open seasonally to double track vehicles. 104,025 acres are open to snowmobiles yearlong. 92.8 miles of trails are open to mountain bikes.

Affected Environment

The Bitterroot Forest portion of this roadless area is 104,025 acres, with the entire Allan Mountain Roadless Area totaling 149,114 acres. The other acres are in the Salmon National Forest. About two-thirds of the roadless area is in Montana and about one-third is in Idaho. Resource values are identified for the whole area, and state and Forest portions. The Allan Mountain area is located in the southern end of Ravalli County in western Montana and the northern portion of Lemhi County in east central Idaho. It lies approximately 45 miles south of Hamilton, Montana, and 40 miles north of Salmon, Idaho.

Primary access is via U.S. Highway 93 which parallels the east side of the area and by the West Fork Road on the west. Various Forest roads leading from these roads serve trailheads which provide access to the interior. Thirty trails totaling about 150 miles provide for travel within the area. Four mining roads totaling 17 miles intrude into the area.

The area extends 28 miles from north to south with a width of up to 13 miles east to west. The area is shaped like a comma with a consolidated core area containing Overwhich Falls (Montana) at the north end and a tail running to the southwest. There are several appendages on the north and the southern portion is almost bisected by mining roads.

Elevations range from about 4,800 feet to 9,154 feet at Allan Mountain in Idaho. Approximately 60 percent of the area is above 7,000 feet. The Idaho portion drains into the Salmon River, the Montana portion into the Bitterroot River.

Topography is steep and generally rocky with shallow, sandy-loam soils. Drainage bottoms are narrow with steepened slopes rising to relatively narrow ridges in the Montana portion and wider, rounder ridges in Idaho.

The area is mostly forested except for peaks in the Allan and Piquett Mountain areas and at spots along the Montana-Idaho border. Lodgepole pine, subalpine fir and white bark pine are the major tree species above 7,000 feet. At lower elevations, Douglas-fir, ponderosa pine, lodgepole pine, and Engelmann spruce prevail.

Ground cover varies with elevation and aspect but grouse whortleberry, pinegrass, beargrass, and elk sedge are common with bunchgrasses on south slopes at lower elevations. Large areas east of Piquett Mountain and in the Straight Creek drainages burned in 1917 and 1919 and some fairly large, grassy openings favored by wildlife were created.

Streams are small, cold, and fast-flowing with gravelly, rocky bottoms and support a native fishery.

Current uses in the area are grazing, mineral exploration, and a variety of recreation activities.

This area is not recommended for wilderness designation in the Bitterroot National Forest Plan.

Assessment of Roadless Characteristics

Natural Integrity

Mining, range management, and fire control activities are the primary impacts in the area. Most of the mining and range impacts are located on the Montana side

Mining activity includes dozer trails and prospect holes in the Overwhich Falls area. Stub roads and pads for core drilling have been reclaimed to approximate natural contours.

Mining access road corridors in Hughes and Mine Creeks and Indian and McCann Creeks are outside the roadless area but are blemishes on an otherwise natural appearing landscape. Corridors in Mine and Indian Creeks almost bisect the southern portion of the roadless area.

On the Montana side, evidence of range activities are fences, salting, stock water tanks, and a cabin in Warm Springs Creek. Cattle have created bare spots around salting grounds and watering areas. Removal of cattle and facilities would allow these areas to heal. Grazing allotment authorizes 491 animal unit months (AUM) on 2,823 acres. An AUM is the quantity of forage required by the equivalent of a 1,000 pound mature cow for one month.

The most evident fire control impacts are the helispots which have been cut along ridgetops. In most cases, a gradual return of tree cover would heal these areas.

Apparent Naturalness

Overall, the area is natural appearing. Man-caused impacts occur on less than 1 percent of the roadless area with most near the center in the vicinity of Overwhich Falls. The ATV trail, 13 miles long, from Road No. 5702 to Overwhich Falls primarily consists of wheel tracks with an incised portion near Overwhich Falls. Wheel tracks are healing naturally, but the incised portions will be evident for the foreseeable future. A short spur road has also been incised through unstable slopes a short distance down Overwhich Creek creating a permanent scar. These would be evident to users when onsite.

A total of 18 system trails totaling 92.75 miles are within, or border, the IRA. These trails are obvious to most users. Many of these trails show signs of motorcycle use.

Opportunity for Solitude-Remoteness
A large core area (45 percent of the roadless area) with the highest wilderness characteristics has been identified. The core area has solitude and most of the highest primitive recreation values and special features. There are outstanding opportunities to be away from others on trails on weekdays.

The size of the northern core area and topography around Overwhich Falls offer excellent opportunities for solitude. It is enclosed by high ridgetops which screen out most off-area evidence of civilization and encompasses the upper reaches of Warm Springs, Slate, and Overwhich Creeks in Montana.

Solitude opportunities are also excellent on the Idaho side in the vicinity of Allan Mountain, in the Indian, Hughes, and Twin Creek drainages in Idaho. Here the mountainous region and steep drainages allow for escape from the timber harvest and roads on adjacent lands. The opportunity for solitude decreases in the southern portion along the state border due to its long, narrow configuration, and the greater opportunity to view man's activities because of midslope boundaries. Lower slopes leading away from this portion are roaded and timber has been harvested. Road corridors exist in Mine and Indian Creeks.

Most of the appendages offer few opportunities for solitude.

Opportunity for Primitive Recreation
The area is well-suited to primitive types of recreation. The existing trail system is well-maintained and suitable for foot, horse, and trail bike travel. Opportunities for high-risk activities such as rock climbing are rare.

The size of the area provides for challenge and risk while using outdoor skills with opportunities for hiking, backpacking, horseback riding, fishing, hunting, backcountry skiing, camping, and enjoying nature.

Opportunities exist for motorcycle users to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale, except in the Overwhich area where Trails #182 and a portion of #248 are well-used by ATVs.

Trails #103, Warm Springs Creek, #177, Warm Springs Ridge, #196 Porcupine Creek, #248 Drop Creek, #404 Fire Creek, #606 Colter Creek, #673 Shields Creek, and #676 Piquett Divide have all been mentioned by mountain bike riders as popular trails.

Snowmobile opportunities are limited by timber and terrain.

(Bitterroot Quiet Use Report – 2008) Motorized users frequently use some routes within this area, but since it is the largest IRA on the Bitterroot National Forest at over 102,000 acres, many trails do not see much use. There was no evidence of use on Trails #103 and #178 {Project File document WSA-029.pdf}.

(Wildlands CPR –Allan Mtn. IRA monitoring trip – August, 2010) - Illegal trail use on Trail #400 to Pass and Capri Lakes, single track widening to double track and new spurs leading to lakes. No sign of motorized use on Trails #673, #606, and from #673 to #400. Significant mountain bike use on Trail #673 {Project File folder 'inventoried_roadless_areas,' Project File document IRA-001.pdf}.

Special features
Subalpine larch stands on Allan Mountain represent the southern limit of this tree species.

Overwhich Falls, while carrying a relatively small volume of water, is spectacular. The geologic processes which led to Overwhich Creek cutting back through erosive materials and capturing the upper reaches of Fault Creek are noteworthy.

High scenic values exist in the area around Allan and Piquett Mountains. Important cultural resources include a portion of the historic Southern Nez Perce Indian Trail and remnants of Forest Service, miner and trapper cabins scattered through the area.

Environmental Consequences

Table 3.3- 33: Summary of miles of Open Roads and Open and Closed Motorized Trails within the Allan Mountain IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Allan Mountain (104,025 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0.1		0.1		0.1		0	
Roads Open Seasonally	0.2		0.2		0.2		0	
Trails Closed to all Motorized (System Trails/OHV Roads)	30.1/1.1	30.1/1.1	0.2	0.2	0.2/0.4	0.2/0.4	91.6/1.1	91.6/1.1
Trails Open to Single-Track:								
Yearlong	9.7	9.7	47.1	47.1	13.9	13.9	0	0
Seasonal	44.5	44.5	35.3	35.3	70.2	70.2	0	0
Trails Open to Double-Track:								
Yearlong	0	0	0/0.4	0/0.4	0	0	0	0
Seasonal	9.5	9.5	9.1/.65	9.1/.65	9.5/.65	9.5/.65	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	2/2.15	2.15			3/2.34	2.34	0	0
Approx. Acres Open to Snowmobiles Yearlong	104,025		104,025		104,025		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	94.9		92.8		94.9		92.7	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Action Alternatives

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued

use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1

Alternative 1 excludes motorized use on 31.2 miles of existing motorized trails compared with Alternative 2, which excludes motorized use on 0.2 mile of existing motorized trails. **Alternative 1** would designate 65.85 miles open to motorized use on trails, of which 2.15 miles are unauthorized trails authorized in **Alternative 1**, compared to 92.55 miles open to motorized use on trails in **Alternative 2**. It designates 0.3 miles open to motorized use on roads, the same as in **Alternative 2**.

Along the 31.2 miles of routes closed to motorized use, Natural Integrity will improve to the extent that motorized-induced changes to the areas are able to recover. Apparent Naturalness will also improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 65.85 miles of trails and 0.3 mile of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. The Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 94.9 miles of routes, which is 2.1 miles more than in Alternative 2.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 1**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 2

The IRA would retain motorized use on 92.55 miles of existing trails and 0.3 mile of existing open roads.

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less **Natural Integrity**, less **Apparent Naturalness**, fewer **Opportunities for Primitive Recreation Experience**, and fewer **Opportunities for Solitude** compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 92.8 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including

inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3

Alternative 3 excludes motorized use on 0.6 mile of existing motorized trails compared with **Alternative 2,** which excludes motorized use on 0.2 mile of existing motorized trails

Alternative 3 designates 96.59 miles open to motorized use on trails of which 2.34 are unauthorized trails authorized in **Alternative 3**. It retains 0.3 mile of motorized use on existing open roads. Along the 0.6 mile of routes closed to motorized use: **Natural Integrity** will improve to the extent that motorized-induced changes to the area are able to recover. **Apparent Naturalness** will improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for Primitive Recreation Experience** will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and by having more area where all users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will increase with more isolation from the sights sounds and presence of motorized use.

Along the 96.59 miles of trails and 0.3 mile of road designated for motorized use: **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Natural integrity** will decrease to the extent that motorized-induced changes to the area increase. **Opportunities for Primitive Recreation Experience** will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 94.9 miles of routes, which is 2.1 miles more than in **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 3**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 92.7 miles of existing motorized trail, compared to **Alternative 2** with 0.2 mile closed to all motorized vehicles. It excludes motorized use on of existing 0.3 mile of road, which is open to motorized vehicles in **Alternative 2**. No routes are designated open to motorized use on trails or roads.

Along the 92.7 miles of routes closed to motorized use: **Natural integrity** will improve to the extent that motorized-induced changes to the area are able to recover. **Apparent naturalness** will improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for primitive recreation experience** will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. **Opportunities for solitude** will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 92.7miles of routes, which is approximately 0.1 mile less than in **Alternative 2**.

In the Allan Mountain IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 4.**

Over-Snow

Designating areas open to over-snow vehicle use impacts recreation experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to Alternatives 1, 2, and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
104,025 acres of the Allan Mountain IRA would be open to over-snow vehicle use in **Alternative 1**, which is the same as **Alternative 2**.

Alternative 2
104,025 acres of the Allan Mountain IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
104,025 acres of the Allan Mountain IRA would be open to over-snow vehicle use in **Alternative 3**, which is the same as **Alternative 2**.

Alternative 4
No acres of the Allan Mountain IRA would be open to over-snow vehicle use in **Alternative 4**. This would close popular snowmobile terrain in this IRA, and would substantially change the primitive recreation and solitude available to nonmotorized users as well as diminish the recreational opportunity/experience for the motorized user. These new nonmotorized acres would result in beneficial affects to the IRA roadless characteristics of solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows.

Table 3.3- 34: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

Allan Mountain IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	-	- -	- -	++
Routes designated open for motorized use- Miles	65.85	92.55	99.59	0
Miles of Open Road	0.3	0.3	0.3	0
Trails closed to all Motorized- Miles	31.2	0.2	0.6	92.7
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	- -	- -	- -	++
Acres open to snowmobiles	104,025	104,025	104,025	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Tolan Creek Roadless Area (1070)

Existing Condition

The Tolan Creek Roadless Area contains 0.4 mile of motorized trails open yearlong to single track, and 7 miles open seasonally to single track vehicles. 7,222 acres are open to snowmobiles. 7.4 miles of trails are open to mountain bikes.

Affected Environment

This roadless area is 7,222 acres. It was in a completed unit plan and consequently did not go through the RARE II process. This roadless area is located in the southern end of Ravalli County, Montana. The county seat of Hamilton is about 35 miles to the northwest. It includes the middle portion of Tolan Creek. The headwaters have been developed by roads and the remaining lands outside the boundary for timber production. Access to the area is from U.S. Highway 93, the East Fork Road, and Forest roads along the boundary. Two trails provide access within the area and the Continental Divide forms the south boundary. The area is about 4 miles long and 3 miles wide.

Tolan Creek drains the eastern portion and Reimel Creek the western. Drainages are steep, V-shaped and separated by broad rolling ridgetops. Elevations range from 4,900 to 7,700 feet. About 20 percent of the area is above 7,000 feet. Forests cover most of the area interspersed with large grassy balds on south and

west-facing slopes primarily In the Reimel Creek drainage. Small areas of rock and talus slopes are common in the steepest portions adjacent to Reimel and Tolan Creeks. Ponderosa pine is common on south slopes and lower elevation ridgetops, Douglas-fir at midslope and lower elevation north slopes, and lodgepole pine and subalpine fir at higher elevations. Ground cover is mostly mixed grasses at lower elevations and beargrass at higher elevations.

The Tolan Creek IRA is not recommended for wilderness in the Bitterroot National Forest Plan.

Assessment of Roadless Characteristics

Natural Integrity

Natural integrity has been affected by range management activities including structural improvements such as drift fences and water developments, and by ridgetop Jeep trails. Grazing allotments authorize 200 AUMs. All grassy balds and ridgetops are grazed. Fences break the area into pastures and reduce cattle/game competition for forage and water developments

Apparent Naturalness

The area appears natural, except for the range improvements and jeep trails.

Opportunity for Solitude-Remoteness

Steep terrain and dense forest provide some solitude; however, civilization appears close at hand due to the areas small size and location of the boundary at midslope above existing roads and timber harvest. Outstanding opportunities away from others on or off trail except during hunting season.

Opportunity for Primitive Recreation

Opportunities for primitive recreation are limited due to the areas small size. Day use opportunities are provided. Participation in activities other than hunting are limited due to the lack of attractions. Challenging experiences are rare. No system trail is open to ATVs. Fall trail closures limit motorcycle use. There are approximately 7.4 miles of trail open to motorcycles.

Opportunities are limited for motorcycle users to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale because of the size of the area.

(Bitterroot Quiet Use Coalition 2008 Monitoring Report) – Trail #78 Reimel Creek, ATVs pushing the single track wider {Project File document WSA-029.pdf}.

Snowmobile opportunities are limited by seasonal trail closures and topography.

Special features

There is evidence of historical Native American use along the ridgetops and scarred trees have been found in stands of larger ponderosa pine. There are no other attractions or unique features.

Environmental Consequences

Table 3.3- 35: Summary of miles of Open Roads and Open and Closed Motorized Trails within the Tolan IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Tolan Creek (7,222 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0		0		0		0	
Roads Open Seasonally	0		0		0		0	
Trails Closed to all Motorized	7.4	7.4	0	0	0	0	7.4	7.4
Open to Single-								

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Tolan Creek (7,222 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Track:								
Yearlong	0	0	0.4	0.4	0.4	0.4	0	0
Seasonal	0	0	7	7	4.1	4.1	0	0
Open to Double-Track:								
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0	0	0	0	2.9	2.9	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	0	0			0	0	0	0
Approx. Acres Open to Snowmobiles Yearlong/Seasonally	1,080/6,142		1,080/6,142		1,080/6,142		1,080/6,142	
Trails open to Mountain Bikes (System Trails/OHV Roads)	7.4		7.4		7.4		7.4	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in inventoried roadless areas (IRAs) impacts their roadless characteristics

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Alternatives 2 and 3

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established

Alternative 1
7.4 miles of trail are closed to all motorized vehicles, which is 7.4 miles fewer open than **Alternative 2.**

Along the 7.4 miles of routes closed to motorized use: **Natural integrity** will improve to the extent that motorized-induced changes to the area are able to recover. **Apparent naturalness** will improve as evidence of motorized use begins to disappear due to natural processes. **Opportunities for primitive recreation experience** will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors.

Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established

Mountain bike travel would be allowed on 7.4 miles of routes, which is the same as **Alternative 2**.

In the Tolan IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in this area under **Alternative 1.**

Alternative 2
7.4 miles of trail are designated open to single track motorized vehicles.

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less Natural Integrity, less Apparent Naturalness, fewer Opportunities for Primitive Recreation Experience, and fewer Opportunities for Solitude compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: Natural Integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent Naturalness will decrease as evidence of motorized use begins to increase. Opportunities for Primitive Recreation Experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 7.4 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3
7.4 miles of trail are designated open to motorized vehicles which is the same as than **Alternative 2**.

Along the 7.4 miles of trails designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 7.4 mile of routes, which is the same as in **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 3**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 7.4 miles of existing motorized trail, all of which are open to motorized use in **Alternative 2**.

Along the 7.4 miles of routes closed to motorized use: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established

Mountain bike travel would be allowed on 7.4 mile of routes, which is the same as in **Alternative 2**.

In the Tolan Creek IRA, there would also be no motorized dispersed camping opportunities because there are no motorized routes available in these areas in **Alterative 4**.

Over-Snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to All Alternatives

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
7,222 acres of the Tolan Creek IRA would be open to over-snow vehicle use in **Alternative 1**, which is the same as **Alternative 2**.

Alternative 2
7,222 acres of the Tolan Creek IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
7,222 acres of the Tolan Creek IRA would be open to over-snow vehicle use in **Alternative 3**, which is the same as **Alternative 2**.

Alternative 4
7,222 acres of the Tolan Creek IRA would be open to over-snow vehicle use in **Alternative 4**, which is the same as **Alternative 2**.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows.

Table 3.3- 36: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

Tolan Creek IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	++	-	-	++
Routes designated open for motorized use- Miles	0	7.4	7.4	0
Miles of Open Road	0	0	0	0
Trails closed to all Motorized- Miles	7.4	0	0	7.4
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	- -	- -	- -	- -
Acres open to snowmobiles	7,222	7,222	7,222	7,222

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Sleeping Child Roadless Area (X1074)

Existing Condition
The Sleeping Child Roadless Area contains 0.3 mile of road open yearlong and 33.5 miles of trails open yearlong to single track vehicles. There are 2.4 miles of motorized trails open seasonally to double track vehicles. There are 22,247 acres open to snowmobiles yearlong. 35.9 miles of trails are open to mountain bikes.

Affected Environment
This IRA lies wholly in the Bitterroot National Forest, and is 22,247 acres in size.

The area is located in the central portion of Ravalli County, Montana about 15 miles southeast of Hamilton, the county seat. It encompasses the middle portion of Sleeping Child Creek including two major tributaries--Two Bear and Divide Creeks. Headwaters and the remaining lands outside the boundary have been roaded and developed for timber production. Access to the area is from State Highway 38, the Sleeping Child Road, and Forest roads along the boundary. A network of four trails provides access within the area.

The area is about 8 miles long and 4 miles wide. Breaklands adjacent to major streams are steep; however, most of the eastern half is characterized by a rather gently rolling landscape. Elevations range from 4,800 to 7,400 feet with about 4 percent of the area over 7,000 feet. About 50 percent of the boundary is well-defined, following ridgetops or streams. The remainder is midslope lying above or below existing development.

Most of the area is forested and interspersed by occasional rock outcrops and wet meadows. Barnett, Coyote, and Two Bear are the better known meadows. Principal tree species are lodgepole pine and Douglas-fir. Ground cover is primarily beargrass.

This area is not recommended for wilderness designation in the Bitterroot National Forest Plan.

Assessment of Roadless Characteristics
Natural Integrity
Approximately seven percent of the area in the southeast was burned in 1961 leaving dozer lines. Grazing: 139 AUMs on approximately 1,500 acres. A cabin site at Coyote Meadows still remains.

A total of six system trails totaling 35.0 miles are within, or border, the IRA. These trails are obvious to most users.

Apparent Naturalness
Most of the area appears natural, except for part of the southeast with its recovering dozer lines and logging roads. A total of six system trails. Cabin site at Coyote Meadows.

(Bitterroot Quiet Use Report – 2008) In 2008, Trail #105, past the step hill one mile from Road #75, is starting to recover with lodgepole pine trees encroaching on the trail. Ruts from past ATV use are visible on the steep hill. No evidence of use by anyone on the trail except deer and elk {Project File document WSA-029.pdf}.

Opportunity for Solitude-Remoteness
Outstanding opportunities away from others on weekdays except during hunting season.

Due to small size and proximity to roads and timber harvest activities, solitude is best found where topographic and vegetative screening exist in the central portion. *Opportunity for Primitive Recreation*

The area provides opportunities for hiking, backpacking, horseback riding, fishing, hunting, backcountry skiing, camping, and enjoying nature. Users can feel a degree of challenge and risk because of light use, steep terrain, and remoteness. The area has loop trip opportunities, has the topography, and is large enough to provide challenge and risk for the motorcycle user. Approximately 2.4 miles are open to ATVs seasonally, and approximately 35.9 miles of system trail are open to motorcycles. Opportunities exist for

motorcycle users to experience a low concentration of other users in an area that appears predominantly natural, with a vastness of scale.

Snowmobile opportunities on east side above 7,000 feet elevation.

Special features
Special features include the meadows.

Environmental Consequences

Table 3.3- 37: Summary of miles of Open Roads and Open and Closed Motorized Trails within the Sleeping Child IRA

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
Sleeping Child (22,247 Acres)	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**	**Approx. Road/ Trail Miles**	**Approx. Miles for Bikes**
Roads Open Yearlong	0.3		0.3		0.3		0.3	
Roads Open Seasonally	0		0		0		0	
Trails Closed to all Motorized	2.2	2.2	0	0	0	0	32/2.4	32/2.4
Open to Single-Track:								
Yearlong	0	0	33.5	33.5	33.5	33.5	1.6	1.6
Seasonal	33.1	33.1	0	0	1.8	1.8	0	0
Open to Double-Track:								
Yearlong	0	0	0	0	0	0	0	0
Seasonal	0/2.4	0/2.4	0/2.4	0/2.4	0/2.4	0/2.4	0	0
Unauthorized Trails Authorized in the Alternative (Count/Miles)	1/1.8	1.8			1/1.8	1.8	0	0
Approx. Acres Open to Snowmobiles Yearlong	22,247		22,247		22,247		0	
Trails open to Mountain Bikes (System Trails/OHV Roads)	37.7		35.9		37.7		36.0	

Direct and Indirect Effects

Summer

Motorized/mechanical transport use on roads and trails in Inventoried Roadless (IRAs) impacts their roadless characteristics.

Indicator: Miles of motorized routes in the IRAs
Indicator: Effects to roadless area characteristics

Effects Common to Action Alternatives

Motorized vehicle travel will contribute to noise, which has the potential to impact the opportunities for solitude associated with roadless characteristics. This could affect some visitors' recreation experiences.

Hiking and the use of recreational livestock would not be restricted to designated routes. Certain areas of the Forest, especially those that receive heavy stock traffic, have a limited network of non-system routes. These routes are primarily old National Forest System trails that are no longer maintained. The continued use of these routes by foot and stock user would cause some minor effects to the landscape's existing character and integrity, where trails erode, and weeds become established.

Alternative 1

Alternative 1 excludes motorized use on 2.2 miles of existing motorized trails, compared with **Alternative 2**, which excludes motorized use no miles of existing motorized trails. **Alternative 1** would designate 37.3 miles open to motorized use on trails, of which 1.8 miles is unauthorized trails authorized in **Alternative 1**, compared to 35.9 miles open to motorized use on trails in **Alternative 2**. It designates 0.3 miles open to motorized use on roads, the same as in **Alternative 2**.

Along the 2.2 miles of routes closed to motorized use, Natural Integrity will improve to the extent that motorized-induced changes to the areas are able to recover. Apparent Naturalness will also improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for Primitive Recreation Experience will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. Opportunities for Solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

Along the 37.3 miles of trails and 0.3 mile of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. The Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 37.7 miles of routes, which is 1.8 miles more than **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 1**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 2

The IRA would retain motorized use on 35.9 miles of existing trails and 0.3 mile of existing open roads. No trails would be closed to motorized use.

As long as motorized user numbers remain constant there will be no change to existing roadless characteristics. However, as conditions currently exist, the IRA has less **Natural Integrity**, less **Apparent Naturalness**, fewer **Opportunities for Primitive Recreation Experience**, and fewer **Opportunities for Solitude** compared with areas with motorized travel restrictions.

If motorized user numbers increase over time: **Natural Integrity** will decrease to the extent that motorized-induced changes to the area increase. **Apparent Naturalness** will decrease as evidence of motorized use begins to increase. **Opportunities for Primitive Recreation Experience** will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet

nature on its own terms without the use of motors. **Opportunities for Solitude** will decrease with less isolation from the sights sounds and presence of motorized use.

Mountain bike travel is allowed on 35.9 miles of routes.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 2**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 3

Alternative 3 does not exclude motorized use on any existing motorized trails which is the same as **Alternative 2**. **Alternative 3** designates 39.5 miles open to motorized use on trails of which 1.8 miles is unauthorized trails authorized in **Alternative 3**, which is 4.6 miles more than in **Alternative 2**. It retains 0.3 mile of motorized use on existing open roads, same as **Alternative 2**.

Along the 39.5 miles of trails and 0.3 mile of road designated for motorized use: Apparent Naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for Primitive Recreation Experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for Solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Mountain bike travel would be allowed on 37.7 miles of routes, which is 1.8 miles more than **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under Alternative 3. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Alternative 4

Alternative 4 excludes motorized use on 34.4 miles of existing motorized trail, compared to **Alternative 2** with no miles closed to all motorized vehicles. This alternative allows motorized use on existing 0.3 mile of road which is the same as **Alternative 2**. This alternative allows motorized use on 1.6 miles of trails, which is 34.3 miles less than in **Alternative 2**.

Along the 34.4 miles of routes closed to motorized use: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights sounds and presence of motorized use.

Mountain bike travel would be allowed on 36 miles of routes, which is 0.1 mile more than in **Alternative 2**.

The current management direction that allows motorized vehicle access for dispersed camping within 300 feet (600 foot corridor) of either side of a designated road and trail would continue under **Alternative 4**. Motorized wheeled access for dispersed camping is permitted on most areas of the Forest, including inventoried roadless areas, recommended wilderness, and wilderness study areas; it is not allowed in Designated Wilderness.

Over-snow

Designating areas open to over-snow vehicle use impacts recreational experiences

Indicator: Acres of IRAs open to over-snow vehicle use and effects to roadless characteristics

Effects Common to Alternatives 1, 2, and 3

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by over-snow vehicles, leaving little accessible untracked powder for nonmotorized users while providing opportunities for unrestricted off-route over-snow vehicle use.

Over-snow vehicles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that such use would expand into some lightly used portions of the Forest.

Where over-snow vehicle use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude as can chances of encountering others while recreating.

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year, and some for only a short term basis. As a transitory winter use, over-snow vehicles leave few visible signs of use. The primary effects on roadless characteristics are to natural integrity, related to stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are increased which reduces opportunities for solitude.

Conflicts of uses and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area.

Noise impacts caused by machines would continue.

Alternative 1
22,247 acres of the Sleeping Child IRA would be open to over-snow vehicle use in **Alternative 1**, which is the same as **Alternative 2**.

Alternative 2
22,247 acres of the Sleeping Child IRA are open to over-snow vehicle use in **Alternative 2**.

Alternative 3
22,247 acres of the Sleeping Child IRA would be open to over-snow vehicle use in **Alternative 3**, which is the same as **Alternative 2**.

Alternative 4
No acres of the Sleeping Child IRA would be open to over-snow vehicle use in **Alternative 4**. This would close popular over-snow vehicle terrain in this IRA, and would substantially change the primitive recreation and solitude available to nonmotorized users as well as diminish the recreational opportunity/experience for the motorized user. These new nonmotorized acres would result in beneficial affects to the IRA roadless characteristics of solitude and primitive recreation.

A qualitative rating of the alternatives responsiveness to roadless/wilderness characteristics follows.

Table 3.3- 38: Qualitative Rating of Alternative's Responsiveness to Wilderness Characteristics

Sleeping Child IRA				
Wilderness Characteristic	**Summer Alt 1**	**Summer Alt 2 Existing Condition**	**Summer Alt 3**	**Summer Alt 4**
Summer: Natural Integrity, Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	- -	- -	- -	++
Routes designated open for motorized use- Miles	37.3	35.9	39.5	1.6
Miles of Open Road	0.3	0.3	0.3	0.3
Trails closed to all Motorized- Miles	2.2	0	0	34.4
	Winter Alt 1	**Winter Alt 2**	**Winter Alt 3**	**Winter Alt 4**
Winter: Natural Integrity, , Apparent Naturalness, Opportunity for Solitude and Remoteness, Opportunity for Primitive NonMotorized Recreational Experience	- -	- -	- -	++
Acres open to snowmobiles	22,247	22,247	22,247	0

(- -least responsive to maintaining wilderness characteristics, - less responsive, +more responsive, ++ most responsive)

Please refer to Table 3.3- 39 for a Summary of Effects to Roadless Characteristics within Inventoried Roadless Areas for all Action Alternatives.

Table 3.3- 39: Summary of Effects on Roadless Characteristics for All Action Alternatives

Effects to Roadless Characteristics				
		Which Direction is the effect? Improving, Stable or Degrading?		
Roadless Characteristics	**Is there an effect? Yes or No**	**Existing Condition**	**Action Alternatives**	**Describe the Actual Effect**
Soil, Water, Fisheries and Air Resources	Yes – soil, water and fisheries; No – air resources	Localized effects to soil, water and fisheries resources where route expansion has occurred or	Minor to negligible soil and water effects where environmentally benign motorized routes are maintained;	No unique or critical resources identified, but the following applies to identified issue areas. **Soils, Water Quality, Fisheries:** All action alternatives will likely maintain or improve existing fisheries, water quality, and soil resource conditions through designating motorized trail and road routes, yet the extent of improvement in

Effects to Roadless Characteristics				
		Which Direction is the effect? Improving, Stable or Degrading?		
Roadless Characteristics	**Is there an effect? Yes or No**	**Existing Condition**	**Action Alternatives**	**Describe the Actual Effect**
		routes are unsustainable due to terrain. Condition generally stable; some areas slightly degrading where unacceptable erosion levels or route expansion are occurring. Negligible effects to air quality.	improving condition where existing motorized use issues have been addressed by increased motorized restriction (seasonal or full-year). Alternatives 1 and 4 would improve conditions; Alternative 3 would likely maintain current localized effects and stable to slightly degrading areas in IRAs. Negligible effects to air quality.	conditions effects will likely vary by alternative (see Chapter 3: Watershed Resources). Effects may include decreased risks of vegetation and soil disturbance, erosion, sedimentation, and negative effects to aquatic habitat. All action alternatives comply with the applicable fisheries, water, and soil related standards and guidelines from the FP as well as other pertinent laws, regulations, and directives (i.e. Clean Water Act, Endangered Species Act). **Recreational Use:** Overall, natural resources would benefit from specifically designating motorized road and trail routes, this usually serves to minimize cross-country disturbance to visitors and minimize on-trail user conflicts. Closing travel by mountain bikes and other motorized/mechanized equipment would decrease unwanted or illegal trail development but would increase the need for enforcement efforts for the near future in recommended wilderness areas.
Sources of public drinking water	No	No systems identified	NA	NA
Diversity of Plant & Animal Communities	Yes	Motorized use in roadless areas may reduce the diversity of animal and plant communities by eliminating, fragmenting or simplifying habitat. Motorized use, in roadless areas, may reduce plant diversity by potentially introducing invasive plant species and creating a monoculture.	Alternatives 1 and 4 would improve conditions. Alternative 3 would degrade conditions	Motorized vehicle use in roadless areas eliminates habitat within the trail tracks by destroying vegetation. This fragments habitat for small animals which may be unwilling to cross the openings created by removing the vegetation. Motorized vehicles can introduce seeds of invasive plant species, which can create monocultures, simplifying habitat by reducing or eliminating native plant diversity along routes. Alternatives 1 and 4 reduce the risk of eliminating, fragmenting or simplifying habitats by reducing the total length of routes open to motorized vehicles. Alternative 3 increases the risk of eliminating, fragmenting or simplifying habitats by increasing the total length of routes open to motorized vehicles.

Effects to Roadless Characteristics				
		Which Direction is the effect? Improving, Stable or Degrading?		
Roadless Characteristics	**Is there an effect? Yes or No**	**Existing Condition**	**Action Alternatives**	**Describe the Actual Effect**
Habitat for TES and Species Dependent on Large Undisturbed Areas of Land	Yes	Motorized use in roadless areas increase the risk of disturbance and/or mortality to many rare plant and wildlife species. It would also increase erosion and invasive plants which would decrease available rare plant habitat.	Alternatives 1 and 4 would improve conditions. Alternative 3 would degrade conditions	Motorized use in roadless areas increases the risk of disturbance and/or mortality to many wildlife species, including elk, wolverines and fishers. Motorized disturbance during the archery season has been identified as a factor causing elk to move onto private land winter ranges prior to the rifle season, thus making large number of elk unavailable to public land hunters, and limiting FWP's ability to manage elk numbers. Over-snow motorized vehicle use in wolverine denning habitat appears to cause wolverines to move more and become more nocturnal in their activity patterns, which may reduce productivity of young. Over-snow vehicle use in roadless areas facilitates trapper access to remote areas that could otherwise provide refugia for forest carnivores like wolverines, fishers, marten and lynx. Increased access for trappers increases the risk of trapping mortality for these species, even though there is no legal trapping season for some of them. Alternatives 1 and 4 reduce the risk of disturbance and mortality to wildlife species by reducing the total length of routes open to summer motorized use, and the area open to over-snow vehicle use. Alternative 3 increases the risk of disturbance and mortality to wildlife species by increasing the total length of routes open to summer motorized use, and the area open to over-snow vehicle use. Motorized use in roadless areas increases soil disturbance and act as vectors, dispersing invasive plant species, into unoccupied areas. Motorized vehicles may directly affect rare plants or indirectly, by altering or impacting rare plant habitat in a way where rare plants can no longer establish or thrive in that habitat. Alternative 1 and 4 would reduce or eliminate disturbance. Alternative 3 increases disturbance and negative effects for rare plant species.
Primitive & Semi-Primitive Classes of Recreation	Yes	Stable	Stable to sequentially changing in Alts. 1, 3, and 4 due to Alt 3 permitting the most motorized route use and Alt 4 the least	Some IRAs will continue to be managed for motorized uses while others will not depending on the specific alternative. Recommended wilderness areas in Alt's 1 and 4 will be managed for non-motorized/mechanical transport uses. There is no effect on availability for similar experiences in surrounding areas or region as much primitive and semi-primitive class recreation, both motorized and non-motorized, exists throughout the State of Montana and on adjoining National Forest lands in Idaho. However, depending on future travel planning decisions the availability of motorized, non-motorized and bicycle use in these classes may change from the existing level of availability.

Effects to Roadless Characteristics				
		Which Direction is the effect? Improving, Stable or Degrading?		
Roadless Characteristics	**Is there an effect? Yes or No**	**Existing Condition**	**Action Alternatives**	**Describe the Actual Effect**
Reference Landscapes for Research Study or Interpretation	Yes	Stable to slight decline where route expansion has occurred or routes are unsustainable due to terrain. May compromise, over time, unique off-route features	Stable to sequentially improving in Alts 1 and 4 with Alt 3 permitting the most motorized route use and Alt 4 the least.	Overall, landscape features are average through the portion not proposed for wilderness values. There are some larger streams but nothing outstanding. Vegetative variety does exist in some areas with a mix of deciduous and evergreen trees and shrubs. Rock outcrops and canyons are typical throughout but not outstanding when compared to the adjacent Selway-Bitterroot Wilderness. In the recommended wilderness areas, there are some unique features – namely mountain lakes, unusual canyon features, waterfalls, and rock features. With the designation of existing routes for motorized travel, there will be no damage to landscape features or vegetation.
Natural Appearing Landscapes with High Scenic Quality	Yes	Stable to slight decline where route expansion has occurred or routes are unsustainable due to terrain. May over time compromise the visual quality of areas with high scenic quality.	Stable to sequentially improving in Alts 1 and 4 with Alt 3 permitting the most motorized use and Alt. 4 the least.	The current visual quality objectives range from Retention to Modification depending on the combination of landscape character class and visitor sensitivity components. Current visual quality objectives are met in all areas
Traditional Cultural Properties and Sacred Sites	Yes	Stable to decreasing where route expansion has occurred or routes are not sustainable due to terrain. May compromise over time, important properties or sites.	Stable to sequentially improving in Alts. 1 and 4 and Alt 3 permitting the most motorized route use and Alt. 4 the least.	Archaeological and ethnographic sources indicate the historic and prehistoric use of these areas for camping, hunting, fishing, gathering, grazing, mining, harvesting timber and traveling. For the purpose of this analysis, the Bitterroot National Forest Plan and site records were used to determine the nature and distribution of known sites. All action alternatives would reduce the risk of motorized travel adversely affecting traditional and cultural properties and sacred sites by defining the area where motorized use could occur.
Other Locally Unique Characteristics	No	NA	NA	

Summary of Effects by Alternative for All IRAs

Summer

Alternative 1

Within the 11 IRAs, miles of motorized trails decrease from 312 miles to 159 miles in **Alternative 1**, a change of 153 miles, compared to **Alternative 2**. Miles of open road, when compared with **Alternative 2**, decrease from 9 to 5 miles in **Alternative 1**. Miles of trail open to mechanical transport (bicycles) decrease from 390 miles in Alternative 2 to 328 miles in **Alternative 1**.

There would be a total of 164 miles of designated routes open to motorized travel in **Alternative 1**.

Alternative 1 would restrict all motorized travel in the summer and over-snow, as well as bicycle use in RWA portions of the IRAs.

Under **Alternative 1** Trail #39 would be closed to all motorized moving the area towards the desired condition or goal of MA 5 which states in III-37 (6), that ", "*pending resolution by Congress, that portion of the management area within the boundary of Montana Study Act areas will be administered according to the goals and standards established for Management Area 6."* The goal being, "*pending action by congress, manage to maintain the presently existing wilderness characteristics and potential for inclusion in the wilderness system."*

In response to many comments received on the DEIS concerning trails that were proposed to be closed to motorized use because they lead to Designated Wilderness, 7 miles of the 40 that were proposed to be closed in the DEIS would remain open to single track vehicles in **Alternative 1** in the FEIS. These include Sweathouse Creek (Trail #121), Gash Creek (Trail #122), Holloway Lake (Trail #393), and Hole in the Wall (Trail #434).

Along the 153 miles of routes closed to motorized use, natural integrity would improve to the extent that motorized-induced changes to the areas are able to recover. Apparent naturalness will also improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to increased isolation from the evidence of man, and more feeling of a vastness of scale, more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

The opportunity to use some of these trails would change to nonmotorized use, but the use of the trail is not lost. Visitors could still hike, ride bicycles, or horseback ride on these trails. Nonmotorized recreation opportunities would improve under **Alternative 1.** Hikers and stock users desiring nonmotorized cross country travel to remote destinations, free from noise and vehicle pollution, would not encounter motorized vehicles unless those users were violating the designation.

Restricting motorized use in these management areas would better ensure the long-term ecological processes remain intact and operating because the roadless areas would not be subject to current or potentially increased future ground disturbance associated with motorized vehicles in particular.

Along the 164 miles of routes designated for motorized use: If motorized use numbers remain constant the use will be concentrated on 50 percent of the existing trails. Apparent naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. The opportunities for primitive recreation experience will decrease with less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for solitude will decrease with less isolation from the sights, sounds, and presence of motorized use. The sights and sounds of motorized vehicles with an IRA may diminish the quality of the recreation experience for some visitors.

Alternative 2

Within the 11 IRAs, under **Alternative 2**, the miles of open road remains the same at 9, and miles of motorized trails remain the same at 312 miles, for a total of 321 miles of motorized routes. The miles of mechanical transport (bicycles) trails remains at 390 miles. No existing routes would be excluded.

As conditions currently exist, the IRAs have less natural integrity, less apparent naturalness, fewer opportunities for a primitive recreation experience, and fewer opportunities for solitude compared with areas with motorized travel restrictions.

If motorized use numbers increase over time: Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent naturalness will decrease as evidence of motorized use begins to increase. Opportunities for primitive recreation experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Trails within the RWA portions of the IRAs would continue to be open to motorized/mechanized transport use. Where motorized/mechanized use does occur it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of the area. The noise associated with motorized use can affect the feeling of solitude.

While the trails in the IRA are primarily managed for pack and saddle stock use, most permit bicycle use. Currently, bicycle use of trails is at a low level, and most trails are not routinely used by bicycles but comments received on the DEIS indicated some trails were gaining in popularity in the Blue Joint and Sapphire IRAs as well as Warm Springs Creek Trail #103, Warm Springs Ridge Trail #177, Porcupine Saddle #196, and Drop Creek #248.

Under **Alternative 2,** Trail #39 would be remain open resulting in continued erosion of fines and exposing more rock and widening of trail tread. This would not move the area towards the desired condition or goal of MA 5.

Alternative 3

Within the 11 IRAs, under **Alternative 3,** there would be 361 miles of motorized trail compared to **Alternative 2,** an increase of 49 miles. In **Alternative 3**, the miles of open road remain the same as **Alternative 2** at 9 miles. Miles of trail open to mechanical transport (bicycles) increase by 5 miles, compared to **Alternative 2,** for a total of 394 miles in **Alternative 3.**

In response to the many comments received on the DEIS, the requirement that "No motorized vehicles or mechanical transport [will be] allowed in Designated Wilderness and Recommended Wilderness" was changed for **Alternative 3.** In the RWA portions of the IRAs, (Selway-Bitterroot and Blue Joint recommended additions to wilderness), routes would remain open to motorized travel (motorcycles) and mechanical transport (bicycles). Those trails in the Selway-Bitterroot additions and the trails in the Blue Joint area do see some use, and the public has expressed a desire to have those trails open to motorcycles and mountain bikes. This action would not prevent non-conforming uses from being established, as well as not protecting the high value of the area for providing primitive recreation.

Alternative 3, to a greater degree than **Alternative 2,** does not acknowledge there are other social effects to Wilderness attributes associated with these types of uses. Trails within IRAs leading to Designated Wilderness would continue to be open to motorized/mechanized transport use. Where motorized/mechanized use does occur it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with "modern" civilization, because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of the area. The noise associated with motorized use can affect the feeling of solitude.

Along the 370 miles of routes open to motorized use: natural integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent naturalness will decrease as evidence of motorized use begins to increase. Opportunities for primitive recreation experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having more area where fewer users meet nature on its own terms without the use of motors. Opportunities for solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

In addition, if motorized use numbers remain constant the use will be concentrated on 86 percent of the existing trails. Apparent naturalness will decrease as evidence of motorized use begins to increase. Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Opportunities for primitive recreation experience will decrease with; less isolation from the evidence of man, less feeling of a vastness of scale and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Under **Alternative 3,** Trail #39 would be remain open resulting in continued erosion of fines and exposing more rock and widening of trail tread. This would not move the area towards the desired condition or goal of MA 5.

Alternative 4

Within the 11 IRAs, under **Alternative 4,** there would be 2 miles of motorized trail compared to **Alternative 2,** a decrease of 310 miles. In **Alternative 4,** miles of open road decrease to 4 miles compared to 9 miles in **Alternative 2.** Miles of mechanical transport (bicycles) decreases 154 miles in **Alternative 4** for a total of 236 miles compared to **Alternative 2.**

Alternative 4 would prohibit all motorized travel in the summer and over snow as well as bicycle use in RWA portions of the IRAs. While motorized/mechanized transport may not always have physical impacts on the landscape, prohibiting mechanized transport and motorized vehicles, from RWAs/IRAs acknowledges there are other, social effects to Wilderness attributes associated with these types of uses. This action would protect the existing high value of the areas for providing primitive recreation experiences and ensure the area retains its wilderness qualities.

Along the 315 miles of routes closed to motorized use in **Alternative 4**: Natural integrity will improve to the extent that motorized-induced changes to the area are able to recover. Apparent naturalness will improve as evidence of motorized use begins to disappear due to natural processes. Opportunities for primitive recreation experience will increase due to more isolation from the evidence of man, more feeling of a vastness of scale, and more area where all users meet nature on its own terms without the use of motors. Opportunities for solitude will increase with more isolation from the sights, sounds, and presence of motorized use.

Restricting motorized use in these management areas would better ensure the long-term ecological processes remain intact and operating because the roadless areas would not be subject to current or potentially increased future ground disturbance associated with motorized vehicles in particular.

In very small portions of a few IRAs along the 6 miles of routes open to motorized routes: If motorized user numbers increase over time: Natural integrity will decrease to the extent that motorized-induced changes to the area increase. Apparent naturalness will decrease as evidence of motorized use begins to increase. Opportunities for primitive recreation experience will decrease due to less isolation from the evidence of man, less feeling of a vastness of scale, and by having an area where fewer users meet nature on its own terms without the use of motors. Opportunities for solitude will decrease with less isolation from the sights, sounds, and presence of motorized use.

Under **Alternative 4,** Trail #39 would be closed to all motorized moving the area towards the desired condition or goal of MA 5.

Over-Snow

Alternative 1

Within the 11 IRAs, there would be 214,137 acres open to over-snow vehicle use in **Alternative 1**, a decrease of 180,523 acres compared to **Alternative 2**.

Acres that would not be available for over-snow vehicle use would be the Blue Joint and Selway- Bitterroot RWAs, portions of the Selway Bitterroot IRA, portions of the Sapphire and Blue Joint WSAs, goat habitat in the Willow Creek and Moose Creek Areas, Lolo Creek, Needle Creek and Swift Creek IRAs, and portions of the Stony Mountain IRAs.

Those acres closed are within existing closure orders areas, acres within recommended wilderness areas, and inventoried roadless areas. The primary effects to roadless characteristics in alternatives that have less open over-snow areas are effects to natural integrity, primarily relating to reduced stress to wintering wildlife (see Chapter 3, Section 3.5, Wildlife, of this FEIS), and increased opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are less which enhances those opportunities for solitude.

Those IRA acres currently closed to motorized over-snow activities would remain closed; however, as a result of comments received on the DEIS, acres open to motorized over-snow use within IRAs increased by 1,080 in the Camas Lakes area. These are acres surrounding the Camas Lakes area. Both user groups (motorized and nonmotorized) indicated using motorized means to access the area, however, upon arrival, their use patterns of motorized and nonmotorized change, which could create conflict in the area but, based on the means visitors access the area and the comments indicating desire for that type of experience, those acres were opened to snowmobiling in **Alternative 1**.

High elevation areas that remain open, such as open slopes and bowls, would continue to be heavily used by motorized over-snow users, leaving little accessible untracked powder for nonmotorized users and provide opportunities for unrestricted off-route over-snow use. Perceived conflict of use and safety issues (fast moving machines not seeing a nonmotorized user) between motorized and nonmotorized over-snow users could continue and possibly escalate if users choose to recreate in the same area. Noise impacts caused by machines would continue.

Nonmotorized users would be able to utilize the entire Forest for over-snow recreation; however, approximately 1,030,696 acres on the Forest would be available exclusively for nonmotorized over-snow opportunities in **Alternative 1** compared to 846,163 acres in **Alternative 2.** Finding quiet, untracked areas to recreate in would be easier for nonmotorized users with this alternative.

Alternative 2

Within the 11 IRAs, 394,660 acres would remain open to over–snow vehicle use in **Alternative 2.** No areas would be closed to their use.

High-elevation areas would continue to provide opportunities for unrestricted motorized use. Conflict of uses and safety issues between motorized and nonmotorized over-snow users would continue and possibly escalate. Noise impacts caused by over-snow vehicle use would continue.

Currently, over-snow vehicle use is not prohibited in the RWA portions of the IRAs unless closed by special order. Over-snow vehicle use has been noted in the Selway-Bitterroot additions up Lost Horse, in Blue Joint Creek, and along the western edge of the Bitterroot Valley. These areas were extremely difficult to access with over-snow vehicles when the Forest Plan was issued; however, now there is evidence the use is occurring. Where motorized over snow use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. Motorized use can be associated with “modern” civilization because it is a mechanized form of travel that was not available in historic times. This use can affect the primitive character of an area. The noise associated with motorized use can affect the feeling of solitude.

Alternative 2 permits winter motorized use to continue though it is Wilderness non-conforming use. If and when, these areas are designated as Wilderness, the use would be curtailed.

Nonmotorized users can utilize the entire Forest for over-snow recreation. Approximately 846,163 acres on the Forest would be available exclusively for nonmotorized over-snow opportunities.

Alternative 3

Within the 11 IRAs, there would be 395,346 acres open to over-snow vehicle use in **Alternative 3**, an increase of 686 acres compared to **Alternative 2.**

Currently over-snow vehicle use is not prohibited in IRAs other than where existing route and area-based restrictions are in place. Over-snow vehicle use has been noted in some IRA areas where terrain is more open. The RWA portions of the IRAs, Selway-Bitterroot, (including Blue Joint Creek), would be open to over-snow vehicle use in **Alternative 3** based on comments received during the DEIS.

Where motorized over-snow use occurs, it can affect the naturalness of an area and the feeling of being undeveloped. **Alternative 3** permits the non-conforming use of winter motorized use to continue in the RWA areas of the IRAs. If and when RWAs are designated as Wilderness, the use would be curtailed.

Alternative 3 would provide opportunities for both motorized and nonmotorized users, with more emphasis placed on motorized use. High-elevation areas, such as open slopes and bowls, would continue to be heavily used by motorized over-snow users, and provide opportunities for unrestricted off-route motorized over-snow use.

The over-snow vehicle experience on the Forest would continue to provide many play areas and remote destinations for over-snow users to enjoy. Conflict of use and safety issues between motorized and nonmotorized over-snow users would continue and possibly escalate. Noise impacts caused by over-snow vehicle use would continue.

Snowmobiles do not currently access all areas that are unrestricted due to physical constraints (step timbered terrain) or lack of consistent snow cover. It is likely that snowmobile use would expand into some lightly used portions of the Forest under this alternative. Wilderness characteristics would only be impacted during a portion of the year and some for only a short term basis. As a transitory winter use, snowmobile use leaves few visible signs of past use. The primary effects to roadless characteristics are effects to natural integrity, primarily relating to stresses caused to wintering wildlife (please refer to the Wildlife section, Section 3.5 of this FEIS), and reduced opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating is increased which reduces opportunities for solitude.

In **Alternative 3,** nonmotorized users would be able to utilize the entire Forest for over-snow recreation; however, approximately 841,484 acres on the Forest would be available exclusively for nonmotorized over-snow opportunities compared to 846,163 acres in **Alternative 2.** Finding quiet, untracked areas to recreate in could be more difficult for nonmotorized user with this alternative.

Alternative 4

Within the 11 IRAs, there would be 9,133 acres open to over-snow vehicle use in **Alternative 4**, a decrease of 385,527 acres compared to **Alternative 2.** This alternative is responsive to public comments on the "original" Proposed Action in the DEIS for increased opportunities for nonmotorized recreation.

The primary effects to roadless characteristics in alternatives that have less open over-snow areas are effects to natural integrity, primarily relating to wintering wildlife (please refer to the Wildlife section, Section 3.5 of this FEIS) and increased opportunities for solitude and a sense of remoteness. Chances of encountering others while recreating are less which enhances those opportunities for solitude.

Over-snow vehicle use has been noted in the Selway-Bitterroot additions up Lost Horse, in Blue Joint Creek, and along the western edge of the Bitterroot Valley. These areas were extremely difficult to access with over-snow vehicles when the Forest Plan was issued; however, now there is evidence the use is occurring.

Alternative 4 would exclude 104,025 acres in the Allen Mountain IRA from over-snow vehicle use to address winter wildlife issues concerning the wolverine. Other IRA closures in this alternative include Lolo Creek, Needle Creek, Sleeping Child, North Big Hole, Swift Creek, Sapphire, portions of Stony Mountain, and those adjacent to the Bitterroot portion of the Selway-Bitterroot Wilderness. In addition, this alternative does not allow for over-snow vehicle travel in RWAs and WSAs on the Forest as shown on the **Alternative 4** Over-Snow Travel Map.

Some recommended wilderness acres are currently closed in **Alternative 2** with a special closure order and are not available for over-snow travel.

Alternative 4 responds to the issue raised by nonmotorized users relating to a need for more nonmotorized opportunities, particularly in winter, by providing approximately 1,234,706 acres on the Forest exclusively for nonmotorized over-snow opportunities. Many nonmotorized over-snow users do not want to share the same settings with over-snow vehicle users because of associated exhaust smells, noise, loss of solitude, and safety concerns with fast-moving vehicles. All are seeking settings that meet their specific recreation interests and needs.

Because some favorite motorized areas would be closed, users may choose to use other areas on the Forest, other National Forests, or state and private land. Although there would be opportunities for motorized over-snow activities, users may have a difficult time finding areas that meet their needs and desires off the groomed system. Furthermore, the loss of areas for over-snow vehicle use will concentrate users into smaller areas, potentially resulting in crowding.

Identifying nonmotorized acres could displace some over-snow motorized users to other areas on the Forest or to neighboring forests. Additionally, it could result in an increase in nonmotorized use.

The reduction in available motorized acres with this alternative addresses concerns associated with noise and safety related to motorized and nonmotorized uses in the same area. Although they would be less than the other action alternatives, noise impacts caused by motorized over-snow use would continue. Conflict of use and safety issues between motorized and nonmotorized over-snow users, in the Camas Lake area, would continue and possibly escalate.

All restrictions would close popular snowmobile terrain in these IRAs, and would substantially change the primitive recreation, diminishing the recreational opportunity/experience for the motorized user. These new nonmotorized acres would result in beneficial affects to the IRA wilderness attributes of solitude and primitive recreation.

Nonmotorized users would be able to utilize the entire Forest for over-snow recreation; however, approximately 1,030,696 acres on the Forest would be available exclusively for nonmotorized over-snow opportunities.

Comparison of Alternatives for All IRAs

Summer

Alternative 4 would have the largest reduction of miles designated for motorized use (310), followed by **Alternative 1** (153 mile decrease). There would be no change with **Alternative 2**, and **Alternative 3** would see a 49 mile increase in the miles of trails designated for motorized use. **Alternative 3** would have the greatest number of miles of motorized routes, 370, within the IRAs, followed by **Alternative 2** (321), and **Alternative 1** (164). **Alternative 4** would have the least, 6 miles.

Closing motorized roads and trails in IRAs is proposed to provide large blocks of quiet areas, to protect those roadless characteristics that have been identified by nonmotorized users as providing solitude, tranquility, and a more primitive recreation experience. Additionally, there would be benefits to wildlife, including a lack of disturbance and increased security, and to other resources including soils and water resources. Providing a quiet, nonmotorized opportunity requires a block of land sufficiently large to buffer noise from adjacent areas where motorized recreation may occur. Large blocks of quiet areas enhance the recreation experience for users such as hunters, fishermen, hikers, horseback riders, and mountain bikers. Many nonmotorized recreation users feel their expectations for a quiet recreation experience cannot be met in areas where motorized recreation occurs.

Under **Alternative 4**, there would be 2 miles of motorized trails in the IRAs, while in **Alternative 1**, reductions would occur in the following IRAs: Allan Mountain, Blue Joint, Sapphire, Selway-Bitterroot, and Stony Mountain. Under **Alternative 3**, the increase in trails designated for motorized use would occur in the Sapphire and Selway-Bitterroot IRAs.

Alternative 4 would have the greatest positive impact on the roadless characteristics, followed by **Alternatives 1, 2,** and **3**. Closing trails to motorized use would result in fewer motorized users, which would increase the opportunity for isolation from the sights, sounds, and presence of motorized use, while the reduction in the use/presence of motorized vehicles would result in improvements in Natural Integrity and Apparent Naturalness.

Of all the alternatives, **Alternative 4** would be the most beneficial to the wilderness character of the IRAs.

Alternative 3 would manage the most miles of motorized routes of any action alternative, 370 miles within the IRA areas. **Alternative 3** would have the greatest negative effect on natural integrity and apparent naturalness. All other action alternatives would manage fewer miles of motorized routes and would better maintain natural integrity and apparent naturalness.

Under **Alternatives 1** and **4**, a decrease in the miles of routes available for motorized use has the potential to increase conflict of uses between motorized and nonmotorized uses, to concentrate uses, and to displace some users, depending upon the use the area receives, which has the potential to impact some visitors' recreation experiences. By concentrating motorized activities in smaller areas, it is reasonable to expect that the noise levels would increase in those concentrated use areas, and decrease elsewhere. Individuals that are displaced that may have a strong personal connection to these areas are likely to feel adversely impacted. Users desiring off-road opportunities would experience changes with the closure of unauthorized routes and routes closed for resource reasons.

On the other hand, decreasing the miles of routes for motorized use increases the miles available for nonmotorized uses, providing for additional quiet areas. Fewer road miles and larger nonmotorized areas would provide a greater potential to meet the experiences sought by nonmotorized users.

Nonmotorized users would be able to hike, horseback ride, and bicycle on motorized routes, and could expect encounters with motorized vehicles.

Over-Snow

Alternative 4 would have the largest reduction in acres available for over-snow vehicle use (385,527), followed by **Alternative 1** (180,523 acres). There would be no change for **Alternative 2**, and **Alternative 3** would see a 686 acre increase. **Alternative 3** would have the greatest number of acres for over-snow vehicle use (395,346), followed by **Alternative 2** (394,660), **Alternative 1** (214,137), and **Alternative 4** (9,913).

Over-snow vehicle use has little lasting impact on the natural features or landscape. Roadless characteristics would only be impacted during a portion of the year (the season of winter begins around December 20-21, and ends around March 19-21, though there could be snow covering the ground on the Forest from November until March, depending upon the location), and some for only a short time basis.

Alternative 4 would have the greatest positive impact on the roadless characteristics, followed by **Alternatives 1, 2**, and **3**. Closing areas to over-snow vehicle use would result in fewer motorized users, which would increase the opportunity for isolation from the sights, sounds, and presence of motorized use. While the reduction in the use/presence of motorized vehicles would result in improvements in Natural Integrity and Apparent Naturalness.

Overall, Alternative 4 would manage the least miles of over-snow routes of any action alternative, 9,133 acres. Alternative 4 would have the greatest positive effect on natural integrity and apparent naturalness. All other action alternatives would manage greater acres of over-snow use.

Alternatives 1 and 4 propose to reduce the number of acres available for motorized over-snow use, with Alternative 4 showing the greatest reduction due to closure of RWAs across the Forest, including the Sapphire and Blue Joint WSAs, goat habitat areas in the Willow and Moose Creek areas, and the adjustment of the northern border of the Stony Mountain IRA. Additional closures to IRAs are the Allan Mountain, Sleeping Child, North Big Hole, Sapphire, and those IRAs adjacent to the Bitterroot portion of the Sapphire WSA.

Alternative 1 removes the opportunity for motorized over-snow use in RWAs across the Forest, portions of the Sapphire and Blue Joint WSAs, the goat habitat areas in the Willow Creek and Moose Creek areas And the northern border of the Stony Mountain IRA. Additional acres in the Camas Creek area been opened to motorized over-snow travel in **Alternative 1**.

As a result, the nonmotorized over-snow user would see an increase in large quiet areas, which would allow them to experience solitude and quiet in a more remote recreation setting. However, motorized users may feel displaced from favorite riding areas as well as concentration of use. Many nonmotorized recreation users feel that their expectations for a quiet recreation experience cannot be met in areas where motorized recreation occurs.

Cumulative Effects

Geographic Boundaries

The defined cumulative effects analysis area for the Wilderness resource is the same as the project area; the portion of the Bitterroot National Forest outside of Designated Wilderness. This analysis area is appropriate to analyze any incremental effects from the actions of this project, in combination with past, present, and reasonably foreseeable activities, because effects of implementing travel planning decisions on the Bitterroot National Forest would be negligible to Wilderness outside this analysis area.

Activities within the Cumulative Effects Analysis Area

Past actions have contributed to the existing condition for the Wilderness resource, which is described in Section 3.3.3 (Affected Environment).

Appendix A to the FEIS describes past, present, and reasonably foreseeable forest and other activities which, when combined with the activities proposed in the Travel Management Planning Project, could result in cumulative effects to the Wilderness resource.

Summer

Some activities have no effect on the Wilderness resource for the following reasons:

- Ø The activity's disturbance is too small and isolated to produce an effect
- Ø Project design features are applied to limit an activity's effects to a negligible level

Examples of forest activities, which, when carried out consistent with existing regulations, produce no cumulative effects to the Wilderness resource include:

- Ø Personal use firewood cutting;
- Ø Personal use Christmas Tree harvesting

- Special uses\Permits
- Public use
- Invasive Plants management
- Timber harvest or wildfire that occurred more than 20-30 years ago

There are forest activities that could result in cumulative effects to the Wilderness resource:

Timber Harvest, Prescribed Burning, and Associated Activities
The sights and sounds of timber harvest and associated activities, such as chain saws and other mechanized equipment including skidders, forwarders, delimbers, and trucks hauling timber, could carry into certain areas such as the Selway-Bitterroot Wilderness and IRA, the Blue Joint WSA and IRA, the Allan Mountain IRA, and the Sapphire WSA and IRA. These areas are located relatively close to development, National Forest System roads, and active management areas, resulting in possible adverse effects on roadless characteristics and wilderness character, particularly opportunities for solitude.

Fuel treatment project are proposed across the Forest, including some roadless areas. Treatments of fuels prior to burning could result in impacts to apparent naturalness, where stumps and slash piles are obvious. During pretreatment and burning operations, short-term impacts to opportunities for solitude could be expected where visitors encounter crews working with chainsaws, helicopters, etc. Treating fuels could result in short-term exposure to invasive plants infestations in burned areas, impacting natural integrity. In the long term, fuel treatment would benefit natural integrity by restoring a more natural fire regime to areas where wildfires have long been suppressed.

Wildfire Suppression
Noise associated with wildfire suppression in Designated Wilderness and RWAs, and in areas adjacent to wilderness, could have an impact on opportunities for solitude. Additionally, fire lines, helispots, and safety zones created by machinery, which can remain on the landscape for many years, could impact natural integrity and apparent naturalness.

In developing the Bitterroot National Forest Plan, Forest Planners allowed for the suppression of wildfires in both Designated and Recommend Wilderness, but they attempted to provide for the preservation of wilderness values. For example, in Recommended Wilderness (MA 6), "Fire control methods which least alter the landscape or disturb the land surface will be used (USDA Forest Service 1987a, III-44). Also, in Designated Wilderness, the direction is to "Utilize suppression or containment strategies that consider reasonable costs, while emphasizing a high regard for human safety, protection of private property and preservation of wilderness values" (USDA Forest Service 19887a, III-47, 52, and 56).

Fire suppression activities can affect the Wilderness experience by restricting or closing access to Designated Wilderness, RWAs, IRAs, and WSAs.

Cattle Grazing
Management of range allotments within inventoried roadless areas could affect apparent naturalness and natural integrity in some areas. Skilled observers are likely to notice that vegetation has been grazed, and species composition affected. The presence of manure and stock trails would not appear to be natural. Range improvement fences and watering facilities are an obvious sign of man's work on an otherwise naturally-appearing landscape. The natural integrity of over-grazed sites could be affected by erosion, invasive plants infestation, species composition changes, soil compaction, and damage to vegetation.

Road and Trail Management
Noise associated with road maintenance and use, by both the public and Forest Service personnel, could carry into certain areas such as the Selway-Bitterroot Wilderness and IRA, the Blue Joint WSA and IRA, the Allan Mountain IRA, and the Sapphire WSA and IRA. These areas are located relatively close to development, National Forest System roads, and active management areas, resulting in possible adverse effects on roadless characteristics and wilderness character, particularly opportunities for solitude.

Invasive Plants Management
Invasive plants management has the potential to have short term effects on opportunities for solitude and apparent naturalness. Forest visitors may encounter work crews and camps, and motorized and mechanized equipment associated with projects. Areas of recently treated weeds may not appear natural to some Forest visitors.

Activities on Private, State, and Federal Lands
Reduced motorized travel opportunities on adjacent National Forests, including the Beaverhead-Deerlodge, Salmon-Challis, and Nez-Perce – Clearwater, could result in increased use on the Bitterroot National Forest, with associated effects including conflicts of uses, concentration, or displacement of users.

Natural Disturbance Events
Events such as floods, large wind events, and blizzards can create large areas of disturbance resulting in blocked trails or routes, drainage or erosion issues to trail treads, and hazardous conditions. Consequently, recreation activities, such as wildlife viewing and accessing trails for hiking, biking, camping, and riding ATVs, may be prohibited for safety reasons.

Over-Snow

As many roads and trails would be snow covered during the winter months, this would limit their use by motorized vehicles and mechanical transport by the public and Forest Service personnel. Subsequently, the sights, sounds, and smells associated with motorized/mechanical transport would be reduced during the winter months in Designated Wilderness, RWAs, WSAs, and IRAs.

The sights and sounds of timber harvest and associated activities, such as chain saws and other mechanized equipment including skidders, forwarders, delimbers, and trucks hauling timber, could carry into certain areas such as the Selway-Bitterroot Wilderness and IRA, the Blue Joint WSA and IRA, the Allan Mountain IRA, and the Sapphire WSA and IRA. These areas are located relatively close to development, National Forest System roads, and active management areas, resulting in possible adverse effects on roadless characteristics and wilderness character, particularly opportunities for solitude.

Reduced over-snow vehicle opportunities on adjacent National Forests, including the Beaverhead-Deerlodge, Salmon-Challis, and Nez-Perce – Clearwater, could result in increased use on the Bitterroot National Forest, with associated effects including conflicts of uses, concentration, or displacement of users.

Cumulative Effects from the Implementation of the Alternatives

Alternative 1
Several of the above-listed present and reasonably foreseeable activities could result in cumulative effects to the Wilderness resource during the summer months, in combination with the activities proposed in the Travel Management Planning Project; timber harvest projects could have cumulative effects on over-snow use.

Alternative 2
Several of the above-listed present and reasonably foreseeable activities could have cumulative effects on the Wilderness resource during the summer months, in combination with the activities proposed in the Travel Management Planning Project; timber harvest projects could have cumulative effects on over-snow use.

Alternative 3
Several of the above-listed present and reasonably foreseeable activities could have cumulative effects on the Wilderness resource during the summer months, in combination with the activities proposed in the Travel Management Planning Project; timber harvest projects could have cumulative effects on over-snow use.

Alternative 4
Several of the above listed present and reasonably foreseeable activities could have cumulative effects on the Wilderness resource during the summer months, in combination with the activities proposed in the Travel Management Planning Project; timber harvest projects could have cumulative effects on over-snow use.

Cumulative Effects Finding

There could be cumulative effects to the Wilderness resource from present and reasonably foreseeable actions including timber harvest, prescribed burning, and associated activities; wildfire suppression; cattle grazing; road and trail management; and activities on private, state, and federal lands in association with the activities in **Alternatives 1, 2, 3,** and **4** during the summer months. There could be cumulative effects from timber harvest projects and activities on private, state, and federal lands in combination with the activities proposed in **Alternatives 1, 2, 3, and 4** during the winter months.

3.3.5 CONSISTENCY WITH THE FOREST PLAN, LAWS, AND REGULATIONS

The Travel Management Planning Project is essentially a planning effort, and does not create new ground disturbance. As such, consistency with existing regulation is a matter of incorporating various concerns into the planning effort. This has been done in all phases of the project, and all alternatives would be consistent with the Forest Plan and other applicable laws and regulations.

A. Bitterroot National Forest Plan

Consistency with the Bitterroot National Forest Plan forest-wide resource and management area standards applicable to the Wilderness resource would be accomplished as follows:

Forest-wide Management Standards

The following Forest-wide standard is applicable to the Wilderness resource:

Subject to existing private rights and pending final action by Congress, wilderness recommendations and Montana Wilderness Study Act areas shall be managed to maintain their existing wilderness character (USDA Forest Service 1987a, II-18).

How Addressed:
Alternatives 1 and **4** propose changes to the motorized/mechanical transport use activities permitted to occur during the summer and over-snow within the Blue Joint and Sapphire WSAs in order to be consistent with the Montana Wilderness Study Act, and within the Selway-Bitterroot additions (which includes Blue Joint Creek), recommended for Wilderness Designation to be consistent with managing for their wilderness attributes.

Management Area (MA) Standards

The following MA standard is applicable to the Wilderness resource:

Management Areas (MA) 1, 2, 3a, 3b, 5, 6, and 8a
Pending resolution by Congress, that portion of the management area within the boundary of Montana Wilderness Study Act areas will be administered according to the goals and standards established for MA 6 (USDA Forest Service 1987a, III-3, 9, 16, 23, 37, and 58).

How Addressed:
Alternatives 1 and 4 propose changes to the motorized/mechanical transport use activities permitted to occur during summer and over-snow within the Blue Joint and Sapphire WSA areas in order to be consistent with the Montana Wilderness Study Act.

Management Area 5
Manage for recreation activities associated with roadless areas, including hiking, hunting, fishing, camping, motor-biking, and snowmobiling. Provide campground facilities in high-use areas to protect soil and water resources and maintain recreation values (USDA Forest Service 1987a, III-37).

How Addressed:
Each alternative offers a variety of roads, trails, and areas available for motorized and nonmotorized use.

Alternative 1 would permit motorized/mechanical transport (including bicycles) on roads and trails, and over-snow vehicles use in most inventoried roadless areas**,** with the exception for Lolo Creek, Needle Creek, and Swift Creek. **Alternatives 2 and 3** would permit motorized/mechanical transport (including bicycles) on roads and trails, and over-snow vehicles use, in most inventoried roadless areas**,** with the exception for Lolo Creek. **Alternative 4** would prohibit motorized/mechanical transport (bicycles) on roads and trails, and over-snow vehicle use, in most inventoried roadless areas.

The Travel Plan will identify the areas, trails, and roads open for motorized vehicle use and the types of vehicles that are permitted. Motorized use will not be permitted where wildlife, adjacent wilderness, soil and water resources, or public safety are threatened (USDA Forest Service 1987a, III-37).

How Addressed:

The outputs of the Travel Management Planning Project will be the motor vehicle use map (MVUM), and the over-snow vehicle use map (OSVUM). Each will designate/identify the roads, trails, and areas open for motorized/mechanical transport (including bicycles) use. **Alternatives 1, 3,** and **4** would not permit motorized use where wildlife, adjacent wilderness, soil and water resources or public safety are threatened. Refer to Appendix G of this FEIS, which shows the routes screened for the DEIS, and Appendix H, which shows the changes to routes between the DEIS and the FEIS.

Management Area 6
Continue current uses which do not detract from wilderness values. Transitory uses such as chainsaws, trailbikes and snowmobiles are appropriate if permitted by the Forest's Travel Plan (USDA Forest Service 1987a, III-41).

How Addressed:
Alternatives 1 and 4 would not permit motorized/mechanical transport use, including ATVs, motorcycles, bicycles, and over-snow vehicles, in recommended wilderness areas. **Alternatives 2** and **3** would permit motorized/mechanical transport use in recommended wilderness areas.

3.3.6 CHANGES BETWEEN THE DRAFT EIS AND THE FINAL EIS

- Minor grammatical edits were made to correct typographical errors and to improve readability
- Section 3.3.3 (Affected Environment) was rewritten to improve clarity and organization. Table 3.3-1 was added.
- Section 3.3.4 (Environmental Consequences) was rewritten to improve clarity and organization.
- Section 3.3.4 (A) Wilderness. Description and effects analysis was added.
- Section 3.3.4 (B) Recommended Wilderness. Description and effects analysis was added. Tables 3.3-3 and 3.3-4 were added.
- Section 3.3.4 (C) Wilderness Study Areas was rewritten to improve clarity and organization; separate assessments were prepared for the Blue Joint and Sapphire areas. Figures 3.3-1 and 3.3-2 and Tables 3.3-5 to 3.3-12 were added.
- Section 3.3.4 (D) Inventoried Roadless Areas was rewritten and reorganized to improve clarity by analyzing each of the roadless areas separately. Figure 3.3-3 and Tables 3.3-13 to 3.3-39 were added.
- Section 3.3.4 (Cumulative Effects) was rewritten to include both summer and over-snow effects

- Section 3.3.5 (Consistency with Forest Plan, Laws, and Regulations. Rewritten to provide clarity and organization, and to provide additional information.